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Wednesday, July 1st, 1925.

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THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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Vol. XII. No. 1. Copyright.

Edited by TOM NEWMAN.
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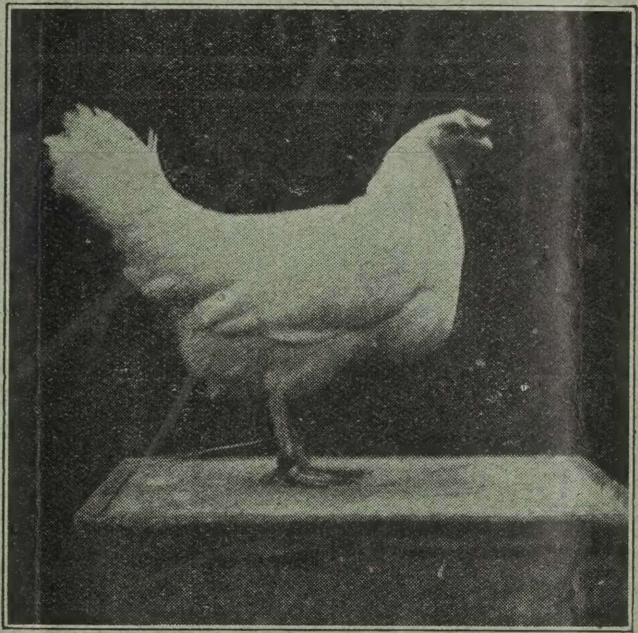

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EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association
WEDNESDAY, JULY 1st, 1925.

Editorial.

THE EARLY HATCHED PULLETS.

We have received the following letter from a correspondent :—

"I see a remark in your April 22nd issue with reference to the Registration of Early Hatched Pullets: That 'the early hatched pullet may be in every respect the equal of her late hatched sister.' I speak without great knowledge, but I have found a very grave and serious disadvantage to early hatching of breeding pullets on free range. It may not be so with penned birds, but on free range—do what I will, with simple food and constant moving, my January hatched White Wyandottes, caught by the seasonal urges to produce, and stimulated by the abundant insect life—come on to lay at the end of April or at the beginning of May, and they never recover from this precocity. Their eggs, though numerous, lack size, and their bone suffers—they have crooked breast bones. Not so, their March or April hatched sisters, who, maturing later, remain absolutely sound in bone, and produce large eggs.

"I am having the same trouble with this season's February hatched pullets, which are growing too fast and may "bolt to seed." Is there not, therefore, in this early hatching a danger to stamina, size of eggs, and bone in a laying strain? Would it be well, having once proved a hen as a producer of good pullets, to hatch more from her in May or June, hoping the cold weather will check the pullets, who, maturing unusually slowly, will produce unusually sound stock in their second season? I realise there will be a loss of a long winter record of a good price on surplus cockerels, and the prolonged use of incubators and equipment, but the birds, I think, that would benefit are the breeding hens of the future—naturally this does not apply to cockerels—who segregated, live undisturbed till the breeding season, and are better out early."

The first thing which will strike our readers is this remarkable precocity of our correspondent's pullets—laying when they are barely four months old, and that is assuming that they were hatched on 1st January. Such precocity must be, to a very great extent, inherited. It is not wholly a question of the date of hatching or the seasonal urge to produce, to which our correspondent alludes. Further, the abundance of insect life would not be in evidence in every season, as there are years when it would not be particularly abundant even at the end of March.

We are quite aware that the earlier hatched pullet reaches sexual maturity at an earlier age than her later hatched sisters, but we have never before heard of Wyandottes laying under four months old, except in one or two individual cases, which must be regarded as very exceptional.

Numerous letters have reached us from all parts of the country, speaking most enthusiastically of the profit producing qualities of the early hatched pullet, and there is little doubt that, as a general rule, it possesses far more vitality, will lay a larger egg, and develop a larger frame than its later hatched sisters. By later hatched in this instance, we mean birds hatched during May or June.

Many well known breeders are of opinion that no pullet will throw such good stock as these January hatched birds.

We are especially interested in the reference made to crooked breast bones, as we have for many years contended that the precocious pullet did not assimilate a sufficiency of calcium salts for both development and production, hence this ricketty condition.

Referring once more to the abundance of insect life, surely this is no more abundant in March and April than in May and June?

One can perfectly understand that there would be individuals in any flock, whether early hatched or not, which would be more easily influenced by environmental conditions than others.

In all breeding, if we wish to be successful, the individual must be studied, and we contend that the January hatched pullet, if selected for her body size, and size of egg, will breed as healthy and vigorous stock as any later hatched bird, and far more so than those hatched in May or June, because in these later hatched birds there does seem good reason to believe that their vitality is affected rather through the egg lacking in certain elements which are essential to the healthy and vigorous development of the chick than to any other cause.

The question of earlier hatching has often been debated in these columns, and the concensus of opinion would seem to be that the early hatched pullet is very profitable, but we should like to have

(Continued at Foot of Column Next Page).

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Modern Poultry Feeding.

By TOM NEWMAN.

Several readers have written asking me questions with reference to the "lesser-known" foods, so I am replying to a few here in the hope that it will be of general interest :—

BUCKWHEAT.

Buckwheat is not extensively used in this country as a poultry food. In France, where it is forbidden to feed wheat to poultry, it is one of the most popular feeds. Its composition is much the same as other cereal grains, except that the fibre content is very much higher ; it is woody fibre too, and this very much discounts its value as a grain feed. Buckwheat middlings—i.e., that part of the kernel immediately under the hull—has a very high feeding value, if the miller is not tempted, as he too often is, to adulterate them with a high percentage of the hulls. The protein content of pure buckwheat middlings is 28 per cent.

The average composition of buckwheat is :—Protein, 10.8 ; Carbohydrates, 62.2 ; Ash, 2.1 ; Fibre, 10.8 ; Fat, 2.5.

MALT CULMS AND DRIED BREWERS' GRAINS.

In making malt the barley grains are first steeped in warm water until soft, then held at a high temperature until they begin to sprout, in which process the amount of diastase, which converts starch into malt sugar, is greatly increased. When sufficient diastase has been formed in the sprouting grain, it is rapidly dried, the dry shrivelled sprouts are then separated from the grain and marketed as malt culms, coombs or sprouts ; the dried grains remaining form the malt. The diastase in the malt converts the starch into malt sugar. This, together with some of the nitrogenous and mineral matter, is extracted, and the residue is sold as wet or dried brewers' grains. Although both contain a high percentage of digestible crude protein, their fibre content is very high, and their great bulk limits their usefulness. The culms have a high ash content, and are rich in iron. The culms deteriorate rapidly when stored, but the dried grain will store as long as bran. I have used both with success in the following formula :—1 lb. of either culms or grains, 1½ lb. each maize meal and ground oats, 4 lb. middlings, 1 lb. fish meal.

Average composition :—MALT CULMS : Crude Protein, 26.4 ; Fats, 1.5 ; Carbohydrates, 45.6 ; Ash, 6.1 ; Fibre, 12.6.

BREWERS' GRAINS : Crude Protein, 26.5 , Fats, 6.9 ; Carbohydrates, 41.0 ; Ash, 3.5 ; Fibre, 14.6.

It should be added that a very high percentage of the fibre of malt culms is digestible, as it is not woody fibre. This is not the case with the dried grains.

RICE MEAL.

Rice meal is obtained from the preparation of "polished rice" for human consumption. Too frequently it is heavily adulterated with rice husks, which are highly indigestible, heavily charged with silica, and have sharp, rough edges, which are said to irritate the walls of the stomach and intestines. A good sample should consist of the outer layer of the rice kernel PROPER, together with the germs and a small amount of the hulls. It would have approximately the same value as maize meal, and the composition would be :—Protein, 12.1 ; Carbohydrates, 44.3; Fibre, 12.4 ; Ash, 9.7 ; Fat, 11.4.

PALM NUT KERNEL MEAL.

This was largely used by poultry-keepers during the war, but it was a question of Hobson's choice, and it cannot be said that it was an unqualified success. It is unpalatable ; the birds did not take kindly to it; it was apt to cause severe scouring. It was said to have a feeding value equal to fine sharps, but this was traced on the analysis, and is not borne out by experience. It should, however, be stated that it was the chemically extracted which caused the trouble ; that was the conclusion we were forced to at the time. Like cocoa-nut meal, it is apt to turn rancid if not properly stored. One would not recommend it as a poultry food at the present time unless it could be bought very cheaply.

The analysis is :—Protein, 16.8 ; Carbohydrates, 35.0 ; Fibre, 24.0 ; Ash, 4.3 ; Fats, 9.5.

The high fibre content is explained by the presence of particles of the husk.

WHEY.

Whey has about half the value of skimmed milk. It is much more watery in its composition, containing only about 6.6 per cent. dry matter. In the manufacture of cheese practically all the casein and most of the fat go into the cheese, leaving the milk sugar, the albumin, and a large part of the ash.

Analysis :—Protein, 0.9 ; Carbohydrates, 4.9 ; Ash, 0.8 ; Fats, 0.2.

(To be Continued.)

EDITORIAL.—Continued.

the views of our members and readers, or, rather, their experiences, with the January hatched pullet.

We are confident that the case which we have just quoted is very exceptional, although we are perfectly aware that in some cases these early hatched pullets may be as precocious, and may degenerate in the way which our correspondent describes, but this we feel is largely a matter of careful breeding and selection.

A Study of the Relative Values of certain Succulent Feeds and Alfalfa Meal as Sources of Vitamin "A" for Poultry.

By **D. E. DAVIS** and **J. R. BEACH.**
(University of California).

FINAL RESULTS OBTAINED IN THE DIFFERENT GROUPS.

Pen I., Group 1--Basal ration, plus field-grown green barley.—Lesions of nutritional disease appeared early in this group. One bird (204) showed pustules on February 18th, and bird 206 on February 20th, the thirty-sixth and thirty-eighth days. The amount of green barley was increased to two grams (2.9 per cent. of the total ration) daily for a period of one week, at the end of which time 206 had recovered, and 204 was showing improvement. After this the barley was reduced to one gram. The last pustule was observed in 204 on March 3rd. No other cases of nutritional disease occurred. Two birds in this group died, one (206) on March 16th, after vaccination, and the other (202) was picked to death on April 16th.

Pen I., Group 2.—Basal ration plus red clover.—One bird (210) showed lesions of nutritional disease for a period of six days, February 18th-23rd (the thirty-sixth to the forty-first days). The amount of clover was increased from one to two grams for a period of one week, February 21st-28th, and then reduced to one gram during the remainder of the experiment. No further evidence of the effects of Vitamin "A" deficiency appeared.

Four birds in this group died. Two of them, 207 and 210, were picked to death on April 19th and 20th, respectively The cause of death of the other two, 212 on March 19th, and 211 on March 27th, was undetermined.

All birds in this pen (Group 1 and 2) were unthrifty in appearance throughout the experiment. They persisted in eating eggs, and three birds were destroyed by their mates. This is the only pen in the experiment in which these troubles were encountered.

Pen II., Group 3—Basal ration plus kale.—Only one bird (238) showed lesions of nutritional disease. In this bird a few pustules appeared on the eighty-seventh day, and persisted until the close of the experiment. During the period of 102 days the amount of kale was maintained at one gram (1.5 per cent. of the total ration) daily No birds in this group died.

Pen II., Group 4—Basal ration plus green alfalfa.—One bird (247) developed positive lesions of nutritional disease on the eighty-seventh day. These lesions, although not severe, were more extensive than those in the bird receiving kale, and persisted for the same length of time. The amount of green alfalfa was maintained at one gram (1.5 per cent. of the total ration) daily. No deaths occurred in this group.

Pen III., Group 5—Basal ration plus blue grass.—All birds remained well throughout the experiment.

Pen III., Group 6—Basal ration plus sprouted barley.—Pustules appeared in the esophagus of bird 222, February 8th, the twenty-sixth day. On February 14th the amount of sprouted barley was increased to two grams (2.9 per cent. of the total ration). Bird 224 developed lesions on February 16th, the thirty-fourth day. Since the condition of these birds did not improve, the amount of sprouted barley was increased to four grams (5.7 per cent. of the total ration) on February 21st. As these birds still failed to improve, the amount of sprouted barley was increased to eight drams (10.8 per cent. of the total ration) on February 28th. Two additional birds, 221 and 223, exhibited lesions on March 11th (the fifty-eighth day). Bird 222 was killed by its mates on March 13th. A fifth bird 220, developed pustules on March 17th. Four birds showed pustules and were unthrifty in appearance on March 19th, therefore the amount of sprouted barley was increased to sixteen grams. The sprouted barley supplied from this time on amounted to 19.5 per cent. of the total ration. Within two weeks after this increase the pustules disappeared in birds 222 and 224. Birds 221 and 223, however, showed numerous pustules until the close of the experiment, but were otherwise apparently in good condition. Although five of the six birds showed evidence of Vitamin "A" deficiency, no deaths from this cause occurred.

Pen IV., Group 7—Basal ration plus carrots.--Bird 226 showed slight lesions in the esophagus for three days (April 10th-11th-12th), the eighty-eighth, eighty-ninth and ninetieth days. These were the only indications of nutritional disease found in this group. All fowls remained otherwise healthy throughout the experiment.

Pen IV., Group 8--Basal ration plus mangel beet.—Two birds, 231 and 232, developed pustules in the esophagus on February 8th, the twenty-sixth day. The amount of beets was increased to two grams on February 9th. Since the condition of these birds increased in severity, the amount of beets was increased to four grams on February 18th, and to eight grams (10.8 per cent. of the total ration) on February 21st. On February 23rd (the forty-first day) bird 232 died of nutritional disease, and on the same day bird 235 showed pustules. Bird 231 died of nutritional disease on February 24th (the forty-second day). Two new cases of nutritional disease developed on February 26th and 27th (forty-fourth and forty-fifth days) in birds 236 and 233 respectively. Beets were increased to sixteen grams (19.5 per cent. of the total ration on February 28th. Bird 234, the last bird of the group, developed pustules on March 4th (the fifty-first day). As all four remaining birds of the group showed nutritional disease lesions, the amount of beets was increased to thirty-two grams (32.6 per cent. of the total ration) on March 7th. From this time until their death or until the close of the experiment each bird received thirty-two grams of beets daily. One bird voluntarily consumed this amount. The others refused to eat this quantity, even though they were allowed to remain in the feeding coop three or four hours after the beets were placed before them. These birds were hand-fed until the lesions in the esophagus became so severe that "forced" feeding was thought to be harmful, which in every case was only a few days prior to death. Bird 236 died April 2nd (eightieth day) of nutritional disease. Post-mortem examination of 234, which died April 6th (eighty-fourth day) showed kidney lesions characteristic of nutritional disease, deposit of urates, and ruptured yolk Bird 235 died of nutritional disease April 18th (ninety-sixth day). Bird 233, after showing pustules for a period of forty-two days, began to improve, and at the close of the experiment, although weak and unthrifty in appearance, it was free from any characteristic lesions. Five of the six birds in this group died of nutritional disease. The remaining one was severely affected, but was apparently recovering when the experiment was terminated.

Pen V., Group 9—Basal ration plus alfalfa meal.—Lesions of nutritional disease appeared in this group in bird 249. on February 16th, the thirty-fourth day. The amount of alfalfa meal was increased to two grams (2.9 per cent. of the total ration) on February 21st. The second bird, 250, became affected February 29th, the forty-seventh day. Lesions appeared in the third bird, 253, on March 7th, the fifty-fourth day. The alfalfa meal was increased to four grams (5.7 per cent. of the total ration) on March 20th, and to eight grams (10.8 per cent. of the total ration) on April 14th. No more birds became affected. Bird 249 showed some improvement while receiving two grams daily, and after the meal had been increased to four and to eight grams, fluctuated between negative and positive throughout the remainder of the experiment. Bird 253 showed some improvement on eight grams of alfalfa meal, but the lesions did not entirely disappear; the condition of bird 250 remained unchanged, it did not respond to the feeding of an increased amount of the meal. No deaths occurred in this group. These birds, however, were not so thrifty in appearance as the birds receiving kale, alfalfa, blue grass or carrots.

Pen V., Group 10—Control.—All controls died of nutritional disease. Five showed the characteristic pustules in the esophagus, and opthalmia. One showed pustules only.

Bird 257 died February 19th, the thirty-seventh day.
Bird 255 died March 2nd, the forty-ninth day.
Bird 260 died March 2nd, the forty-ninth day.
Bird 258 died March 18th, the sixty-fifth day.
Bird 256 died April 4th, the eighty-second day.
Bird 259 died April 16th, the ninety-fourth day.

A tabulated summary of the experiment is given in Table 2.

(To be Continued).

GLAMORGAN AGRICULTURAL COMMITTEE.

COUNTY EGG-LAYING TRIALS—1924-25.

From 19th October, 1924—22nd August, 1925.

Figures are total points to date.

Light Breed.—J. Joshua, Tondu (W.L.), 382; R. J. Evans, Abertridwr (W.L.), 352; Howell and Phillips, Barry (W.L.), 305; Mrs. E. H. Parry, Llatwit Major (W.L.), 262; D Hopkins, Port Talbot (W.L.), 316; D. A. Hann, Pengam (W.L.), 267.

Heavy Breeds.—J. Joshua, Tondu (R.I.R.), 534; R. J Evans, Abertridwr (R.I.R.), 479; A. Evans, Barry (R.I.R.), 466; Harrop-Griffiths and Hall, Bridgend (R.I.R.), 415; J. R. Thomas, Barry (R.I.R.), 374; J. Joshua, Tondu (W.W.), 381.

During the eighth monthly period dry mash birds laid 1046 first grade; 480 second grade; underweight, 45. Wet mash birds laid 933 first grade; 532 second grade; 47 underweight.

C. F. DUNKLEY, Manager.

The use of Poultry against Farm Pests.

By **A. ROEBUCK**

(Adviser in Entomology, Midland Agricultural College).

Continued

The Garden Snail (Helix Aspera, Muller).—Snails carry a conspicuous shell on their backs, and the various species are recognised by their shell characters. In adults of this species the shell will measure 1½ inches across. The ground colour is yellowish, with five brown bands running round, these bands being frequently broken by yellowish cross lines. It is very common in most parts of the country, and collects during winter behind ivy, in box edgings, at the base of walls, etc.

Eggs and young specimens are eaten. Large specimens are often pecked and the shell portion only eaten. Some are left. Those which lose the shell are almost always killed in the process.

Common Banded, Hedge or Wood Snail (Helix Nemorialis, Linne).—This is the common and pretty banded snail so abundant in chalk and lime stone districts. It size it is about three-quarters of an inch broad and half-an-inch high. It is very variable in colour and arrangement of the bands. Perhaps the greatest number are striped with brown or black upon various shades of pink, white or yellow. More frequently there are five bands running round the shell with the border of the hole from which the snail emerges, always of the same dark brown colour as the bands. It is out from the hedgerows and over the fields after showers during the summer. Thrushes are very fond of this and the last species. When fed to hens they have in all cases been eaten, but on occasions adult specimens have been picked up and dropped a few times before finally being destroyed.

Pond or Mud Snails (Limnaea Truncatula, Muller). These belong to a family which inhabits still and running water. Many of them leave the water for short distances, and this particular kind strays furthest on the land. In fact many of the pools it inhabits are dried up in summer. It is specially notorious from the farmers' point of view in that it acts as the intermediate host for the parasite which produces Liver Fluke in sheep, the parasite being a flat worm, Distonum Hepaticum. Specimens of this snail were collected in April, 1925, in Lincolnshire on Marsh Marigolds, rushes and grasses near springs. These were fed to fowls and all readily eaten. The shell is a dark brownish colour, turreted or pointed in shape, and when fully grown is about 2/5 inches long and 1/5 inches wide, with five or six whorls on it. It is common in most places, but not all are capable of infecting sheep. The minute stage of the parasite worm leaves those infected snails while they are on grasses, and it is then eaten by grazing sheep.

Another species of Pond Snail, Linncea Peregra, was fed to hens in 1924 and eaten or destroyed. It is larger, being three-quarters of an inch long, and of a light brown colour. This species is very common, and it is also said to be the intermediate host for the Liver Fluke worm. It does not leave the water to any thing like the same extent as truncatula, but both species come far enough into the fields to be well within the reach of ranging fowls. It seems likely, therefore, that fowls may materially help to keep in check these snails, and thereby indirectly reduce considerably the extensive losses in sheep due to Liver Fluke. Fowls do not become infected with the parasite. To combat these, fowls would have to be run on the low-lying pastures, especially during spring and summer.

Conclusions.—The eggs of several species have been fed to fowls, and in all cases readily eaten. The results seem to indicate that the eggs of all species would be eaten. In the fields these eggs are usually under lumps of soil or stones or in little hollows and tunnels in the ground. Fowls will not be able to reach all such eggs, but a proportion can be reached by scratching, and on arable land many clumps are exposed during tillage operations. Eggs of one species or another are found nearly all the year round, but they are most abundant during late summer and autumn. Young slugs and snails, say under half-an-inch long, appear to be always eaten by fowls. As with eggs, they seem to be about nearly all the year round, but appear most abundant from September to April. Slugs are nocturnal in habits, snails partially so. In their shelters during the day only a small proportion are likely to be found by fowls, but where fowls can be in houses on fields with the doors left open all night, they catch them in the early morning. Slugs feed between the hours of 10 p.m. and 6 a.m. Dull, muggy weather, especially during the dull months of the year, entices them out during the day, thus exposing them to fowls.

Large slugs and snails appear to be, in the main, rejected by fowls. The reason for this appears to be a question of size. The body is too tough to be pecked into bits, and devoured piecemeal. In the case of the large snail, the shell is more relished than the body. It is interesting to note that even small ones are rejected at times when the fowls have had plenty of animal food. Whereas the writer has seen fowls forage for insect larvae until crop-bound; he has never found this take place with slugs. Hens which have refused small slugs have always been well fed with animal food, say, fish meal, and it would seem advisable where good foraging for pests is desired that such animal food as meat or fish meal should be done away with or severely restricted. In the same way hens which are liberally supplied with oyster shell are not so likely to destroy the larger snails for their shells.

The results are very encouraging, and suggest that fowls can very materially help in keeping down these most serious pests against which we have no satisfactory control.

The Willows, Haydock.

Dear Sir,—I take "Eggs" weekly from my local newsagent, and out of the six papers I take it is the only one I can take and read from beginning to end.

Yours sincerely,

(Signed) A. PIMBLETT.

The Sphere of the National Poultry Council

By **EDWARD BROWN, F.L.S.,** General Secretary.

Continued

Great though the effects have been as a result of concentrating our forces, of partial organisation of the Poultry Industry, these have been due to the work of a small minority, whose public spirit and sacrifice of time and money cannot be too highly acknowledged. All the Central or General Poultry Societies have from the outset accorded their support, even though with one or two notable exceptions they have not shown a consciousness of the financial responsibilities. What about those who have done little or nothing, whether societies or individuals? Only a moiety of Poultry Societies are affiliated with the National Poultry Council. Of the large numbers of breeders, whether exhibitors or producers, of those whose business interests are involved in the success and extension of our industry and of distributors of eggs and poultry, to all of whom the work of the National Poultry Council is of supreme importance did they but recognise the facts, a very small percentage have contributed towards its support. There is too much pauperisation of poultry-keepers, who expect others to undertake responsibilities on their behalf in which they bear little or no share. Let me remind them that "the secret of a great advance is to be found in the success with which individuals have used their knowledge to augment the resources of all," and to ask: What right have you to expect others to shoulder your responsibility?

Five years ago, when the National Poultry Council was formed, the fees of affiliation were made very low, perhaps unwisely, in the hope that by so doing organisation would become general. Such has not been the result. It cannot be, in the case of societies, the one penny per member per annum asked for. What is it, meanness or supineness or want of vision? A large number of striking instances could be given which can only be characterised as examples of unmitigated selfishness. Two will suffice. In one county the National Poultry Council responded to a call for defence of poultry-keepers generally, which involved, apart from the administration, an expenditure several times greater than all the contributions received from that area during the last five years. In another instance a poultry farmer, who has confessedly made a very large income from his enterprise, expected that the National Poultry Council should use its financial resources, to say nothing of time and thought, in his behalf, and wanted it to organise a special fund for that purpose. He had only contributed £5 to its funds. The essence of all insurance is anticipatory payment of premiums. Something for nothing appears to be the object of the great majority. They are quite willing to avail themselves of the services of those who "are poor that many may be made rich." They are ever ready in support of proposals to expend other peoples' money without contributing personally. Let me remind them that "resolutions are not carried until they are carried out."

There are more fundamental problems confronting those engaged in Poultry Husbandry, as exhibitors, as producers, as distributors, than are recognised, some of which will call for sustained and united effort, and need the determined and combined action of all. The National Poultry Council's sphere is to secure their solution, to organise the industry in its own defence. That will demand effective and more complete combination. For that purpose moral support and money are equally essential. From the outset the strain of constant anxiety and effort to raise money and keep the machine going has been almost overwhelming, adding enormously to the labour and the time involved in administration.

Has the National Poultry Council rendered an adequate service and justified itself? Is it worth maintaining? or, Has the time come that it should cease or limit its operations? are the questions that can no longer be ignored by every section and branch of the Poultry Industry. Better let it die than continue on a half-paralysed basis. Such in my judgment would be disastrous, a failure which cannot be contemplated. It is not want of money, but the will that is absent. My desire before the time comes for me to lay down this task, which cannot be long, is to see the National Poultry Council in a sound financial position, with an adequate income and a reserve fund to meet emergencies and needs as these arise. Hitherto the response for support has, with one or two notable exceptions, been disappointing in the extreme. The Poultry Industry is worth to the nation at least £25,000,000 per annum. If all concerned, whether exhibitors or producers, vendors of foods and appliances and distributors, would contribute threepence for £100 of their annual overturn, that is, one-eightieth of one per cent., the end in view would be achieved. Meanwhile, I urge that every society should obtain from its members, as two or three have previously done, contributions averaging one shilling per annum per member for the National Poultry Council, which only represents one penny each per month. My hope has been, and still is, that the Poultry Club, as the oldest society, will rise to the occasion, and show its appreciation of the work done, and a vision of what may be yet accomplished by making such contribution. In this respect exhibitors have not risen to their opportunities. It would be the best investment ever made. Unless the Poultry Industry can do that much, can attain so minute a degree of public spirit, even of prevision, it is not worth the efforts expended in its promotion and operation. This can be done easily and without weakening the resources of the societies concerned. What we need to emphasise is the essential value of unity, remembering that all are concerned, and that "The man who shoots the deciding goal is not alone in winning the match."

Galen House, Nightingale Road, Guildford.

Dear Mr. Newman,—I have six White Leghorn hens, and have profited by the advice given in "Eggs" to a very gratifying extent.

Yours truly,

(Signed) E. M. WAIND.

Notes on Utility Ducks.

By A. HAROLD PAINE.

A statement I made in my last article was questioned in a recent issue by Captain F. S. Pardoe, who said that he was very much surprised to hear that ducks may be kept in the smallest of backyards in cities, or allowed a free range over any amount of land, either condition giving good results so far as egg production is concerned. Captain Pardoe went on to say that it is the general farmer who should be encouraged to keep ducks, and that many people with rather more garden than they could utilise would find a few ducks both profitable and beneficial, but he could hardly believe that anyone could seriously advocate keeping them in the smallest of backyards in cities. Well, it will be noticed that I simply said that ducks **may** be kept in the smallest of backyards in cities, and naturally I should never advocate that if other conditions were available. It so happens, however, that I have, during the last few months, received reports from time to time about two Khaki-Campbells which are actually in a very small backyard in Clerkenwell, and their egg production has been rather wonderful. Admittedly it was of two birds only, running with a few hens, but hardly a day had passed but that these two ducks did not produce an egg each. Many years ago I kept a good number of ducks, not actually in the backyard, but in a small wired-in enclosure at the back of the garden where no green food was available, the only growth being a few nettles, yet those ducks—Indian Runners—were almost equal in egg production to any that I have ever bred. Naturally it is much more advisable to run them as I do my own now—in separate grass pens with an average of about five birds to about 150 square yards.

Captain Pardoe also took exception to my statement that 250 egg averages were common, and 300 egg averages not exceptional, and said that this craze for mere numbers unless checked would soon ruin the utility duck, and that these high records can only be attained at the sacrifice of stamina. Well, I can only go by records which I receive from different parts of the country from time to time, and from the performances of my own birds. Regarding the latter, I do not wish to speak here, as it might be considered simply in the nature of an advertisement. I would, however, like to give the records of two pens, one reared in Leicester and the other in Kent. The first pen of six birds produced in a period of eleven months as follows:—No. 1, 294 eggs; No. 2, 237 eggs; No. 3, 276 eggs; No. 4, 288 eggs; No. 5, 261 eggs; and No. 6, 277 eggs, which gives an average of 272 in the eleven months, despite one bird having been ill for three weeks during her best laying period, which put her quite off egg production. The second pen of five birds in twelve months produced as follows:—No. 1, 294 eggs; No. 2, 302 eggs; No. 3, 292 eggs; No. 4, 353 eggs; and No. 5, 281 eggs, an average of 304 eggs per bird in the twelve months. Now in neither of these pens were the birds forced in any way, and one might regard these figures purely and simply as their natural egg production. The Leicester pen has laid excellently through this winter, the eggs in every case being of good size, and some excellent youngsters have been hatched from them this season. It seems to me that given a pretty good strain one can hardly prevent the K.C.—for both these pens were of that breed—from putting up a really good record, and I can assure Captain Pardoe that I should be one of the last to advise any duck-keeper to breed from birds that had been forced to lay excessively, and for my own part I would just as soon breed from birds that have laid, say, anything between 220 and 260 eggs in their first year, provided they were mated to a really good drake, as from those which had put up higher averages. One record of four birds, now over three years old, had produced with quite ordinary feeding—in fact, on one of the simple mashes I have advised from time to time—264 eggs average per bird **in their second laying year.** These ducks were bred on from a pen which averaged 265 in the first year, mated to a drake with a dam's record of 295; although of such good laying strain he was also typical of the breed, being close in type and colouring to his brother, which was judged the best drake in the Dairy Show, 1922 and was also third at the Grand International Show, Olympia.

SIXTH MIDLAND LAYING TEST.

Report for Eighth Month (224 days), ended June 14th, 1925.

Leading Pens in Each Section (Four Birds per pen).

White Leghorns.—A. Snowden, Crosshills, York, 571 eggs; A. Pickard, Chilvers, Coton, Nuneaton, 557; T. Baillie, Rothesay, Scotland, 554.

White Wyandottes.—M F. Phelan, Northam, N. Devon, 578; J. Dowden and Son, Heathfield, Sussex, 561; Misses Argles, Alton, Hants, 565

R.I. Reds.—K. A. Crawford, Dilham, Norwich, 552; L. A. Cooper, Footherley, near Lichfield, 536; Mrs. Athol Stuart, Boxmoor, Herts, 515.

Light Sussex.—F. R. Welch, Bewdley, 524; W H. Brady, Penmaenmawr, 534; Colonel A. Dugdale, Moreton-in-Marsh, 506.

A.O.V. Light Breed.—Ed. Thomas, France (W. la Br.), 501; Blaksley and Blythe Dorset (B.L.), 442; G H. Rayner, Grantham (B.L.), 446.

A.O.V. Heavy Breed.—H. W. Gee, Bromsgrove (Barn.), 487; F. R. Welch, Bewdley (Bf R.), 396; J. Gordon Herbert, Newent (Barn.), 394.

Single Bird Section.—F. Nicholls, Alvechurch, Birmingham (W.W.), 154; F. A Ramm, Shackerstone, Nuneaton (B.L.), 155; J. Small, Edgbaston, Birmingham (B.L.), 149

During the first two weeks of the eighth month of the Sixth Midland Laying Test production maintained a fair level, but owing to the present prevailing spell of hot weather there has been a decline from 70 per cent. to 60 per cent.

The light breeds are laying remarkably well in comparison with the heavy breeds, and this can be accounted for in the latter sections by the number of broodies.

Five birds have died during the twenty-eight days, the numbers of which are: 498, 437, 333, 20, and 109.

In accordance with the requirements of the existing hot weather, it has been found necessary to make a slight variation in the feeding, the method of which is as follows:—The grain has been fed out in the grass runs the whole of the month, the mixture being composed of Wheat, Dari, Oats, and Kibbled Maize. The wet mash has been, and is still being fed at 2.30 p.m., whilst the dry mash hopper is left open for the birds to have free access to at all times of the day.

The general health of the birds is still very good, and as will be noticed, the records of some of the pens are very good.

ALBERT N. BRAIN, Director.

Answers to Queries.

By the **EDITOR.**

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (**NOT from Major Saunders**).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

E. K. (Nantwich) hatched Leghorns the first week in April last year. They began to lay the third week in August, and have put up a remarkable average since then, but their eggs are small, and the birds themselves very small; and "E.K." wants to know how he can avoid a repetition of this trouble, in the first place by checking this year's pullets, and in the second by matings next year. As I have so often said before, this precocity is an inherited factor, and very little can be done to check it by feeding. If we starve the egg organs we starve the body at the same time, and it acts like a boomerang. I can only advise my correspondent not to feed maize to young stock which has this tendency, and limit the animal food. Should the pullets come into lay in spite of this, then he must feed them as heavily as possible, so that there should be sufficient for bodily development and production too. As to breeding from the pullets, this seems to me extremely inadvisable, as they are such small birds, and the small egg factor is dominant to large. If he prefers to do so, I would endeavour to get a male from a dam which did not begin to lay until she was six months and a half old, or even older if she passed the S.P.B.A. winter record. Size of egg he would, of course, consider, and a full year's record of 230 would be better than a higher one. Even with such a mating as this he must expect to find a considerable number of the progeny maturing very early, for the early maturing factor is dominant to late maturity.

S. T. (Newcastle) has Rhode Island Red chicks which, to use his expression, are "stuck," and he wants to know what to do. As he has sent me no details I can't give a definite opinion as to why they are sticking, and I must leave "S.T." to consider the following possibilities:—(1) The parent stock, overcrowding, stale ground, chicks huddling at night, lack of green food, unsuitable feeding, insect life—I won't suggest uncleanliness, because I am sure "S.T." is too intelligent to expect chicks to thrive under unclean conditions. Overcrowding is the most likely cause, and this often occurs with chicks at this age which do not perch. Stale ground is another fruitful cause of chicks hanging fire. If my correspondent will think these suggestions over, and give a little variety in his feeding, he is likely to see an improvement. Perhaps next time he will be good enough to send more details.

S. K. (Wimbledon) writes describing a hen which is suffering from Cloacitis or Vent Gleet. He will be well advised to remove her from the pen, and also the male bird, as it is infectious and appears to be spread entirely by copulation. The inside and outside of the vent should be washed with a 2 per cent. solution of Izal twice daily, and a teaspoonful of sweet oil be given night and morning; if the bird is in a very advanced state of disease it would be much wiser to kill her. The samples of Sussex ground oats sent are of average quality, with the exception of "B," which is oat-feeding meal, and contains a high percentage of husk. The maize meal is a good sample, but the meat and bone contains too high a percentage of bone.

Inquirer (Falkirk) wishes to know in what way charcoal assists digestion, and whether I think it a necessity in the mash for adult stock. Also he has a friend who had serious losses from coccidiosis this season, and asks what is the best way to treat the ground. Charcoal aids digestion by preventing or dispersing gases which form in the stomach. I should hardly say it is **necessary** for adult stock, but it is very valuable with young chicks. The best treatment for the land would be to thoroughly lime it; if it is not a large area, soaking with a one per cent. solution of sulphuric acid would answer.

J. M. (Tetsworth) asks me as to the prospects of January and June hatched pullets laying well in October and December respectively. In answer to his question, January hatched pullets would, under normal conditions, start laying in June and July, and a big percentage of them would moult in September; if carefully managed, would be laying well again in December. I should expect them to beat the June hatched birds in this month, for the late hatched pullets take longer to mature than the early ones, and moreover lay smaller eggs. A June hatched pullet is not a profitable proposition, and, in my opinion, it is a great mistake to hatch for egg production in that month, as they will go into the moult at the same time as March or April stock in the following year, and only produce eggs when they are cheap. The sample of ground oats sent is good value at the money; it is not "Sussex" ground, but would answer the same purpose.

Broody (Wexford) asks whether it is true or not that the mating of old males causes increased broodiness; he has been told this by a friend who has returned from Australia. I have heard this suggestion before, "Broody," but as far as I am aware there is no evidence to support it. I could not definitely say that it is not so, but there seems no possible reason that it should be so. Perhaps your friend could supply you with evidence to support his statement.

L. S. (Staffs) bought expensive sittings of Wyandotte eggs in March. Hatching was bad, and the chicks have been difficult to rear, and are now undersized and weakly. He wants to know how he can feed to effect an improvement. He has reserved a male from a 254 dam, which will be unrelated to the pullets, and asks if I think it will do to mate them. He asks me not to recommend sulphate of iron, as he has given that for some weeks without effect. Very well, I won't, "L.S.," and you would be wise to discontinue it now. I am afraid there is not much to be done, as there is evidently inherent weakness. See that the chicks are in a well-ventilated house, and get them to perch at once; it is important that they should not be allowed to huddle in a corner. Supply plenty of fresh green food, preferably watercress and spinach; add to the mash 2 per cent. of cod liver oil, and give skim milk to drink. In addition, get some good plump white oats, cover with cold water, and allow to simmer on the fire until the water is all absorbed, then dry off with equal parts good bran and middlings, and give as the last feed at night. Constant removal to fresh ground will also help. I am afraid I can suggest nothing more, and cannot promise that this will prove of much use, for, as I said before, the weakness appears inherent.

M. L. B. (N. Wales) sends some feathers and asks for an explanation as to their wrinkled and dried-up appearance. They are from some Buff Rocks which he has bought for breeding next season, and he wants to know if it is due to disease, and whether it is inherited. You need not be alarmed, "M.L.B." The disease is due to a parasite located in the glands at the root of the feather; this appears to live on the secretions which nourish them, hence their wrinkled and dried appearance. Pluck out any of the feathers which look unhealthy, and soak the affected part with a 2 per cent. solution of Izal; a little flowers of sulphur added to the mash would be helpful, the trouble is not inherited. The sample of fish meal contains an excess of oil, the meat meal is better value.

W. W. (Newport, S.W.) asks what I think of the following mash, the parts are by weight:—Bran 2 lbs., clover and malt culms 1 lb. each, thirds 3 lbs., Sussex ground oats 1 lb., bean meal 1 lb., fish meal 1 lb. I am afraid I don't think anything of it, "W.W." There is too much bulk, too much protein, and too much indigestible fibre, too little fat. If you were to increase the middlings to 4 lbs., reduce the bran to 1 lb., the clove: and malt culms to half a pound each, replace the bean meal with maize meal, you would have a much better balanced mash and a cheaper one. (2) As to samples, the thirds contain too much bran, and the bran itself is poor; the clover contains too much stalk and flower and too little leaf, it is not good enough. The ground oats are an excellent sample, and the other meals of good average quality.

THE LANCASHIRE UTILITY POULTRY SOCIETY.

INTERNATIONAL EGG-LAYING TEST, 1924-25.

Held on the Society's Test Ground (adjoining Hutton and Howick Station, L.M. and S. Railway).

Eighth Month Report (May 2nd to May 28th).

The eighth month report shows a decline in the number of eggs laid, which is naturally a seasonal one, the heavy breeds suffering mostly through broodiness, which has been rather heavy; the light breeds continue to do very well.

The leading pens for the month in both the Large and Small Breeders' Section of ten and five birds respectively, making an average of 23 eggs each per bird; the Novice Section slightly less; the Single Bird Section making 27 and 26 eggs.

SUMMARY OF LEADING PENS.

Figures are Eggs and Points to date respectively.

Large Breeders. Section 1.—W. Crabtree, Twiston, 1507, 1572; F. Snowden, Cowling, 1381, 1456; R. Marshall, Forton, 1463, 1421.

Large Breeders. Section 2.—J R. Hull, Thornton-le-Flyde, 1277, 1428; F. Harvey, Bretherton, 1353, 1344; Mrs. A. Molloy, Crumlin, 1341, 1374.

Large Breeders. Section 3.—F. R. Welch, Bewdley, 1328, 1349; W. Hamnett, Blackpool, 1162, 1167; W. B. Bradley, Broughton, 1158, 1219.

Large Breeders. Section 4.—F. Snowden, Cowling, 1332, 1437; J. Thompson, Shrewsbury, 1451, 1470; R. Rodwell, Nelson, 1359, 1442.

Large Breeders. Section 5.—R. Rodwell, Nelson, 1455, 1421; S. Street-Porter, Ely, 1297, 1370; G. B. Metcalfe, Lechlade, 1323 ,1348.

Small Breeders. Section 6.—J. W. Lodge, Holmfirth, 766, 792; Dr. J. E Helm, Newchurch-in-R., 680, 759; P. H. Sephton, Rufford, 720, 751.

Small Breeders. Section 7.—T. Lumb, Hebden Bridge, 727, 735; C. C. Humber, Hoole, 691, 681; G. E. Marsden, Lostock Hall, 695, 693.

Small Breeders. Section 8.—T. Rossall-Sandford, Shrewsbury, 743, 769; Col. S Sandbach, Abergele, 531, 540; W. J. King, Leamington Spa, 465, 462.

Small Breeders. Section 9.—F. F. Fisher, Tarleton, 803, 856; G. W. Sutcliffe, Hebden Bridge, 789, 768; J. McKechnie, Tarleton, 718, 769.

Small Breeders. Section 10.—W. A. Lansley, Whitchurch, 699, 805; O. Rawlinson, Waverton, 669, 668; J. H Hodgkinson, St. Ives, 592, 674.

Small Breeders. Section 11.—Guy Mart, New Longton, 660, 647; Eliz. Priestley, Oxford, 622, 617; Capt. J. T. M. Mee, Gressenhall, 526, 542.

Single Bird. Section 12. Heavy.—J. R. Hull, Thornton-le-Flyde, 160, 182; J Rainford, Penwortham, 151, 174; S. Marquis, Greenhalgh, 140, 149.

Single Bird. Section 13. Light.—S. J. Parsons, Musbury, 160, 171; F. Snowden, Cowling, 130, 160; R. H. Fryers, Bradley, 148, 152.

Novice Breeders. Section 14. Heavy.—Miss Walker, Hothersall, 691, 733; W. Ellwood, Galgate, 622, 617; R. Hargreaves, Barton, 667, 625.

Novice Breeders. Section 15. Light.—W. Ellwood, Galgate, 739, 743; S. Marquis, Greenhalgh, 674, 707; R. Bradley, Hutton, 692, 692.

CHAS. PARKER, Secretary, Fox Street, Preston.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

CROOKED BREASTS.

I have received the following letter from Major Disney-Roebuck:—

> "You have often said in 'Eggs':—
>
> (1) That crooked breast-bones are not necessarily inherited.
>
> (2) That they are most frequently caused by improper perches.
>
> (3) That young stock should be encouraged to perch early.
>
> (4) That proper perching arrangements should be provided.
>
> In former years I have had a number of crooked breast-bones, which I felt sure were in no way due to the parent stock. Latterly my young stock have been provided with grids to perch on, made, as you describe, of plasterer's lathes. At a later stage the birds have had to perch on fine wire netting stretched tight, and when removed to the big houses, have had to squat on dropping boards, from which the perches have been temporarily removed. The result has been extraordinary. This season out of some 2,000 chicks a crocked breast-bone has been a rarity. This morning I handled about 70 January and February hatched cockerels, and there was not a crooked breast-bone among them. Possibly my experience may induce some members to follow your excellent advice."

I was once severely hauled over the coals for giving this advice, by a writer in the Press, but he was not a poultry-keeper. We have to look upon it from all points of view, and my experience has been that chicks which perch early are less subject to those autumn colds, which so often badly affect the autumn egg yield, than those which are not allowed to perch until they are four or five months old, and are huddled in corners on the ground. There is a greater tendency to crooked breast and to a ricketty condition generally among the progeny of very highly productive stock, not in all cases, of course, but it is certainly very marked in the progeny of some individuals, especially if they have started to lay very early.

EARLY MOULT.

One of our members wrote during the hot spell at the beginning of June to say that all her hens had moulted, and were scarcely laying at all. She was feeding the following mash:—Three bran, two middlings, one S.G.O., and half fish meal. Here was a case where under-feeding following heavy production left the birds in under-condition, and directly the hot spell came they fell under it, and moulted. Had one part maize meal been included in that formula, it is probable they would not have done so.

The next letter is from Windermere. The writer says that his pullets, hatched February 18th, appear to be dropping a lot of feathers, although to look at them they are apparently tightly feathered. This is a chicken moult, before adult plumage is assumed, and generally it is at this age it takes place. My correspondent then goes on to ask: "What is the scientific or natural reason for a moult, as latter seems to occur at all seasons under different conditions, and with different aged birds?"

This is not an easy question to answer in a short space, but I will endeavour to explain. Professor Kerr in his work on "Embryology" says:—"The most interesting point is that the successive sets of feathers—the down feathers of the nestling, and the annual or other feathers of the adult—are not to be looked upon, as has been customary, as successive series of independent individual feathers. On the contrary, the down feather and the definite feathers which succeed it in the series of moults, are simply portions of a single greatly elongated and basally-growing structure, the first down feather being its tip, and the succeeding feathers being portions of it.

The moult consists not in the shedding of the whole feather, but merely in the breaking off of its projecting portions. The natural cause of the moult, as well as I can explain it, is the feather follicle becomes active, and the new feather pushes out the old. My correspondent asks, then—when to expect it and why to expect it. As to when to expect, normally any time from July till the end of August; with individuals, however, it will vary greatly. The heavy producer moults late, probably because the production of eggs robs the feather follice of something, and prevents it becoming active. As to why, I am afraid I cannot explain any more than this. My correspondent should remember that the moult is not peculiar to fowls. Most of the mammalia shed their hair; newts, lizards and frogs their skins; crabs and lobsters their shells.

In answer to other correspondents, there is no special feeding needed during the moult. The birds should be in a condition to moult. If they are undernourished, they will come through it badly; feed as usual. If they hang in the moult add four per cent. linseed meal in the mash, and feed kibbled maize as the grain feed, as I have said before. I never have trouble with the moult, because I feed maize all the year round. Great care should be taken to shelter moulting birds from the blazing sun.

INTENSIVISM.

Much interest has been aroused in the Wellingham experiments. The success in rearing the chicks with less than four per cent. mortality is regarded as wonderful, and it certainly is good when we think that two per cent. of the deaths were due to accident. However, we have a long way to go yet, and we shall probably find some snags before we have done. Still I must confess to hoping that with intensive rearing we shall be able to considerably reduce the very heavy mortality with young chicks; by these I mean those from up to six or eight weeks old. Some of the greatest difficulties may be overcome by the discovery of the ultra-violet rays, and the influence on healthy development, and we must look ahead. Chick mortality is so high at present that it considerably prejudices the chances of success. I am no believer in the talk of the "survival of the fittest" under conditions of poultry-keeping at the present time that is urged by some who seek to comfort others for the heavy mortality. It is in 99 cases out of a hundred the survival of the unfit. At the time of writing this (June 12th) over a dozen birds had started to lay at Wellingham. The first to lay weighed 3lbs., which is a good average weight at the age (18 weeks). The eggs are small, but we shall soon see an improvement. If there is not, the experiment will take on another aspect, for we cannot countenance the small egg, and we must look for the remedy. High fecundity, with the consequent early maturity, in a favourable environment, may bring about other problems for us to solve.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

KEIGHLEY AND DISTRICT BRANCH.

The monthly meeting will be held in the Temperance Hall, Keighley, on Wednesday, July 1st, at 7.45 p.m.

AGENDA.—Minutes of monthly meeting held on June 3rd, 1925. Delegate's report (Mr. Harold Walker) of quarterly Council meeting of the Yorkshire Federation of Poultry Societies, held at Otley on the June 6th, 1925. Invitations to visit Mrs. Clay, The Riddings, Long Preston, W. Yorks., and Mr. Frank Snowden, Raikes Hall P.F., Cowling, Yorks. Proposed Egg Collection for Hospitals and the aged poor in the district. Correspondence, and any other business.

APPLICANTS FOR MEMBERSHIP.

Macdonald, A. F., "Bushy Bank," Penn, Bucks.
Miller, Mrs., "Homefield," Broad Lane, Whoberley, Coventry.
Hodgkinson, Tom, "Torsend," Tirley, Tewkesbury.
Viney, Mrs. N., Arkwood P.F., Manley, near Warrington.
Macfarlane, M., Le Pride Poultry Farm, Henfield, Sussex.
Crab and Pilkington, Messrs., Flight P.F., Red Lion Hill, Orsett, Essex.

DEAD POULTRY SHOW.

WEMBLEY, June 16th—19th.

Specials B P.I.E. to Exhibitors aggregating most points on all four days: 1st, 40s.; 2nd, 30s.; 3rd, 20s.

Points scored:—Mrs. M. A. Grant, 35; Mrs C. N. Goode, 34; Mr. W. H. S. Roberts, 9. (Note.—Mr. C. N. Goode's birds did not arrive on the 19th).

JUNE 16th.

Class 1.—Mrs M. A. Grant, 1st and 3rd and P.C. Medal; C. N. Goode, 2nd. Class 2.—W. H. S. Roberts, 1st and P.C. and Clarendo Special; Mrs. M. A. Grant, 2nd and 3rd. Class 3.—W. H. S Roberts, 1st and N.U.P.S. Special; C. N. Goode, 2nd. Class 4.—C. N. Goode, 1st; Miss N. H. Bell, 3rd. Class 5.—C. N Goode, 3rd. Class 6.—C. N. Goode, 3rd.

JUNE 17th.

Class 1.—A. S. Walker, 1st and P.C. Medal; Wye College, 2nd; Mrs. M. A. Grant, 3rd. Class 2.—Mrs. M. A. Grant, 1st and P.C. Medal and Clarendo Special; Mrs. Grant, 2nd; Mrs. Grant, 3rd. Class 3.—W. H. S. Roberts, 2nd. Class 4.—Miss N. H. Bell, 1st and N.U.P.S. Special and P.C. Medal: Wye College, 2nd; Mrs. C. N. Goode, 3rd. Class 5. Wye College, 1st and P.C. Medal; C. N. Goode, 2nd; H. J. Wild and Son, 3rd. Class 6.—C. N. Goode, 2nd.

JUNE 18th.

Class 1.—Mrs. M. A. Grant, 1st and P.C. Medal; C .N. Goode, 2nd; W. Venn Carr, 3rd. Class 2.—C. N. Goode, 1st and P.C. Medal and Clarendo Special; Mrs. M. A. Grant, 2nd and 3rd. Class 3.—C. N Goode, 1st and N.U.P.S. Special and P.C. Medal; C. N. Goode, 2nd and 3rd. Class 4.—C. N. Goode, 1st and P.C. Medal; Mrs. M. A. Grant, 2nd; Miss N. H .Bell. 3rd. Class 5.—C. N Goode, 1st and P.C. Medal; H. J. Wild and Son, 2nd and 3rd. Class 6.—C. N. Goode, 1st and P.C Medal.

JUNE 19th.

Class 1.—Mrs. M. A. Grant, 1st and 2nd, P.C. Medal and N U.P.S. Special. Class 2.—Mrs M. A. Grant, 1st, 2nd, and 3rd. Class 3.—Mrs. M. A. Grant, 1st and Clarendo Special; W. H S. Roberts, 2nd. Class 4.—C. Mansfield, 1st and 2nd.

Mr. C. A. House, of "Poultry World," kindly officiated as judge on the last day.

A letter of thanks has been sent to the judges and donors of prizes for the help they have given in connection with the show.

Correspondence.

ROUP.

To the Editor of "Eggs."

Sir,—I congratulate you and thank you for the resolution you propose to move at the meeting of the National Poultry Parliament, asking for a committee to be formed to enquire into and report to the public on Roup and other poultry diseases, as to the best known methods of preventing, and, if I might suggest it, of curing disease.

As regards your courteous comments on the outbreak I have suffered from, you will, I am sure, allow me to make one or two in return, in the same spirit.

I published a full account as you say, because it was clear to me that outbreaks, not quite so severe, but sufficiently so, were of much more frequent occurrence than I had previously thought. I have received a large amount of correspondence describing such outbreaks with suggested remedies. I may say, in passing, in one case the disease destroyed three-quarters of the stock, and in two other cases the outbreaks were severe in intensive plants. I can fully understand the desire to hush these matters up, but it appears to me that what is wanted is more complete ventilation of these outbreaks, so that we may learn more about them, the causes that lead to the outbreaks, and the remedies to apply.

As regards the opinions I put forward, I do so diffidently. I am in a very humble frame of mind, chastened by misfortune.

As roup is endemic on most poultry farms, I doubt the efficacy of the slaughter policy, because it is impossible to tell how many birds are infected, and in the case of an epidemic would have to be carried on indefinitely. What I mean is this, there is strong evidence to show that the disease incubates for considerable periods. Hens that were removed from the laying houses for the purpose of hatching, and that showed no signs whatever of the disease, and were kept in strict isolation on their nests, frequently developed roup in a fortnight, three weeks, and even longer, after they were isolated. If the germs of roup are nearly always prevalent where large numbers of poultry are kept, I do not quite see where the "carrier" theory comes in, in the case of cured birds. I have many hundreds of cured birds, and our chief hope is that these birds are now immune, at any rate for a long period. After cure they quickly recover condition, and are soon in full lay. The presence of roup germs is supported by the fact that if two cocks fight, unless their wounds are treated quickly with some antiseptic lotion or ointment, they are nearly certain to catch roup. This has always been the case here for many years, although there was no roup apparent in the pens. If the roup germs are always there the presence of cured carriers would not seem to make much difference. The manure pits have been in existence for twelve years. I do not see how it is practicable to abolish them without raising the birds dangerously near the roof in the lean-to type of house with which this farm is equipped. The land immediately round the houses is heavily limed twice yearly. I agree that the manure pits should be cleaned out more often than they have been, and I intend, if and when the farm is reconstructed, to arrange to have this done, but I do not think the virulence of the outbreak is to be attributed to them.

I put forward this theory for what it may be worth ; it is now a little over three years since the birds were put on the colony system, and the land has been in full occupation all the time. If the germs of roup are passed in the excrement, it is possible that by passing more often through the host they may have become more virulent ; if the land is rested, alternately with use, the germs deposited on the land may become weaker or die out when the land is vacated. Against this theory is to be placed the fact that the houses are in use all the time, and that it has been the general custom to feed the hens in the litter, which is full of powdered excreta. Since the beginning of the outbreak all food has been given in the troughs, and I think this is a practise that will be continued for the future. I am informed by a medical official of the Ministry of Agriculture that it has been discovered that the swine fever virus cannot live outside the pig for more than 14 days, that disinfection has been discontinued, and that all that is done is to clear the premises of pigs for 21 days and then they can be restocked with safety. I understand also that the virus of foot and mouth disease is very short-lived outside the host. The virus of roup has not been isolated, as it is one of that kind that is so infinitely small, that it passes the filters ; in this respect it resembles the foot and mouth disease virus.

A characteristic of the diseases, I am creditably informed, which are propagated by a very minute virus, is that they appear without any apparent direct cause and run their destructive course in a more illogical way. Witness influenza in human beings, foot and mouth disease in cattle, roup in poultry. I had my first experience of roup when a boy, almost 50 years ago. Some one told me that if I wanted eggs in winter I must keep my house warm, so I closed up the ventilators and soon got the birds roupy. With the restoration of fresh air and the use of rue pills—I made these out of chopped rue, mixed with butter—they soon got well. This farm was started 26 years ago, being on the small flock system until 1912. Roup appeared in the second year of its existence, but, if I remember rightly, it was imported then. We are making progress I think, but very slowly, and the death rate is still heavy. I am afraid I must continue to differ with you on the hospital question. You may of course be right, and if we had continued to slaughter all cases as they became visible we might have got off better, but, on the other hand, we might have had very few birds left now if we had carried out that method, and I rather think that would have been the case, as the epidemic seemed determined to run its course until nearly all the adult stock at all events had undergone the ordeal.

I think, perhaps, the ultimate result may be of more interest to the industry than the history of the outbreak, whatever that may be; it will be published.

T. W. TOOVEY.

MR. TOOVEY AND ROUP.

To the Editor of "Eggs."

Dear Mr. Newman,—In your article in "Eggs" of June 17th, re Mr. Toovey's losses from roup, you state that "ordinary" remedies proved wholly ineffective, and so far "extraordinary" ones employed have failed. It is a pity you do not give your readers a list of the ordinary remedies which have failed to cure, also a list of the "extraordinary" ones employed; it might have helped your readers considerably to know **what not to do** when treating for roup. Mr. Toovey does inform us in his article on roup that "Sulphur and Sulphate of Copper were not of the slightest use," this is information gained.

I should have more sympathy with Mr. Toovey did I not know that, although he was offered last year a free trial of a new cure for roup, he totally ignored the offer, and I do know that he has not tried it yet. I am still willing to (through you) send Mr. Toovey sufficient of this remedy to treat **and cure** 50 birds if he will accept it, and until he has tested it he has no right to say there is no cure. I may say that the remedy I am offering Mr. Toovey disinfects the excrement before it has passed through the birds, thus rendering it innocuous.

Yours truly,

S.P.B.A.

GUARANTEED EGGS AND THE MARKETING THEREOF.

To the Editor of "Eggs."

Dear Mr. Newman,—Since your editorial some weeks ago on the above, there have been a few letters from producers of Guaranteed Eggs upholding or approving the standard of grading and proportionate pricing as outlined by me in a later letter. But I expected and hoped that you would have had a much greater response to my appeal for other producers to come forward and either condemn or uphold the given standard. Surely it is not too much to expect that those interested in their own welfare, and that of the position held by the British egg in the British markets, will come forward and state their views on such an important matter. The marketing of one's produce, together with the purchasing of food, is amongst the most important business elements of successful poultry farming.

The number of members of our Association producing Clean, Graded, Guaranteed Eggs, and willing to market them at least twice weekly, must be responsible for the production of something over a million eggs weekly. Is it reasonable to suppose, do you think, that if all such accepted the standard (or another to be accepted after discussion) and PRACTISED it, we could make our demands felt? Personally, I am of opinion that, with the help of our powerful Association, eggs of such a standard **honestly kept** would be sought after, in very little time, by more retailers than we could supply.

To show I am not barren of ideas on a matter in which I am so interested, I will make the following suggestions, and perhaps you, Mr. Newman, and other members will make constructive criticism on them :—

(1) Let us agree on a Standard—by ballot if necessary. I suggest the following Grades: 1½ oz. (Autumn only), 1¾ oz., 2 oz., 2¼ oz.; and 2½ oz. Each grade to comprise eggs weighing an eighth of an ounce either side of the grade, with the exception of the 2½ oz. Grade which should include eggs up to 2¾ ozs. Price to be based upon the top quotation in the "Daily Telegraph" under the Market column plus 2/6 per 120 for Standard 2 oz. eggs; other Grades to be paid for in proportion, i.e., when the Market quotation is 17/6 our price for 2 oz. eggs would be 20/-, 1½ oz. eggs would be 15/-, 1¾ oz. 17/6, 2¼ oz. 22/6, 2½ oz. 25/-. Eggs should be thoroughly clean and marketed twice weekly.

(2) When the Standard is agreed upon, members should be asked to subscribe to it, and to sign a declaration and ABIDE by it. If there are sufficient members agreeing to this Standard and have signed the (what I will call) S.P.B.A. Declaration, then

(3) The Association shall make a register of these producers of Clean, Graded, Guaranteed Eggs, and then shall

(4) Put an advertisement in the Daily Press advertising such eggs with the S.P.B.A. Guarantee, giving a full description of the grading and proportionate pricing.

(5) As the orders come forward, the Association shall forward the orders to such mem-

bers as are best able to meet the requirements of the retailers (as to quantities, of course).

The S.P.B.A. Register should comprise the kinds of eggs produced by the members and the quantities produced. The S.P.B.A. should issue official Contract Forms for use of the retailers and members, and should attend to the drawing up and signing of the contracts.

Our Association's warranty with the eggs should go a long way to inducing retailers to come forward, and if members will strictly and honestly abide by the Standard, we shall soon gain such a name for our eggs as to ensure our rapid progress.

With reference to Major Cave's letter in issue June 17th, unless we take steps NOW to ensure a fair price for eggs heavier than two ounces, breeders will not trouble to produce birds laying large eggs. There are more and more complaints every year about the small eggs, and we must see to it that we produce an egg to compete with the large Dutch eggs. The "pull of the race" will see to it that we get all the small eggs we want; only years of selective breeding will increase the size of eggs. Major Cave is fortunate in being "able to produce plenty of 2¼ oz. eggs if necessary," everybody cannot do this.

Yours very sincerely,

W. R. MORRIS HAMMOND.

GRADE "A" EGGS.

To the Editor of "Eggs."

Sir,—Acting on the request, in your editorial footnote, to my letter published in "Eggs," June 3rd, I am venturing to submit to you the following basis of a scheme.

It is based on a scheme already proved successful in the case of milk, and also on the assumption that the Ministry, as in the case of milk, would be willing to co-operate in any scheme that should promise a legitimate and reasonable advantage to the home producer, at the same time benefiting the retailer, and providing the consumer with an article for which he is always asking, often paying for, and seldom obtaining.

It must, of course, be decided what age Grade "A" eggs must be, and it must, I think, be conceded that the only age which can be taken into consideration is the age of the egg when despatched to the retailer. I have no idea of any means of checking the age of the egg when sold by the retailer, but it would surely be an enormous step forward if the age of the egg on despatch were guaranteed and stated to the public. It is, of course, to the advantage of the retailer to sell as quickly as possible. Discussion may and probably will produce improvements; but I would suggest that no egg qualifies as Grade "A" unless it is despatched within three days of the date of laying.

Now for the suggested basis for the scheme:—

(1) **Guarantee.**—It is no use for a producer merely to state that his eggs are Grade "A." An official certificate is required.

(2) **Grade "A."**—As a grade, this must be officially adopted by the N.P.C., the poultry societies, and, if possible, officially laid down by the Ministry of Agriculture.

(3) **Inspection.**—Local branches of the S.P.B.A. should maintain inspectors. The Ministry might, I believe, assist with the salaries of the inspectors, as in the case of the milk scheme if the societies are **local.**

(4) **Certificates.**—Inspectors should issue a dated certificate on the occasion of each visit, to be displayed by the retailer in an appropriate and conspicuous manner. Certificates to be granted to producers who habitually dispatch to the retailer, either daily or within three days of laying. Certificates to be marked "DAILY DESPATCH" or "DESPATCHED WITHIN THREE DAYS."

(5) **Proof of Despatch.**—Proof for the inspector to be taken by comparing invoices and/or Railway Waybills with production sheets.

(6) **Inspections.**—To take place, as in the milk scheme ,every six weeks or once a month.

(7) **Cost.**—To be met by a levy per head on the laying flocks of members of the branch. An inspector need not necessarily be a whole-time job unless he takes two or three branches. Possibly even a member of the branch, elected by the branch, or appointed by the S.P.B.A., might act as an inspector.

(8) **Retailers** must be prevented from selling, as Grade "A," eggs which are not from certified producers. I expect that here again the milk scheme will be of assistance.

As regards size, the public does not demand 2 oz. eggs; it wants large ones, and should pay for them. Hence, I suggest again "Correspondent's" scale of May 13th. I do not see how it can be improved. Small eggs must be sold as well as large.

Booming may or may not be necessary, but the "Eat More Eggs" campaign failed, and failed rightly, I think, because one only saw one suggested poster that even mentioned English eggs, and the age of the eggs to be eaten was not hinted at.

I therefore suggest that the S.P.B.A. communicates with the Ministry as regards classification, grading, and inspection. After all, the Government is spending £1,000,000 on the marketing of colonial produce as though the colonies couldn't do it by themselves much better than we can.

I suggest that the Poultry Societies, led as usual by the S.P.B.A., should circularise their local branches and get from them lists of producers willing to go to the necessary small expense of inspection, and willing whole-heartedly to co-operate in putting on the market, via their own present channels, English eggs produced and despatched in accordance with the suggested new standard.

I am, Sir, yours, etc.,
S. G. SWAN.

CORRUGATED IRON ROOFS.

To the Editor of "Eggs."

Dear Sir,—A belated note on corrugated iron roofs :—Some five years ago I bought some two-metre lengths of "papery" gauge, coated them both sides with thin tar and nailed them on a thin straw thatch on to the usual framing, and the job still looks good enough for another dozen years. I used bamboos to support the straw, but hazel bean rods should be good enough. For the extra 1½ inches in thickness 4-inch wire nails, with washers, are required.

This is not too hot in summer, and sweating is not noticeable in winter.

J. STOCKS.

Lenham Heath, Maidstone.

CORRUGATED IRON ROOFS.

To the Editor of "Eggs."

Dear Mr. Newman,—I have been very interested in your correspondence on corrugated roofs for poultry houses.

Rather more than two years ago I put up an open-fronted laying shed almost entirely of this material, and it has been most satisfactory in every way. It measures 30 feet by 14 feet, and was used first for rearing pullets from eight weeks old, and subsequently as a laying shed fitted with trap-nests.

The walls of corrugated sheets are sunk from 8-12 inches into the ground to keep out rats; the front has single sheets of corrugated laid lengthwise along the ground (2 feet high), and it is otherwise open, except for sparrow netting and a wooden hood along the top.

I was quite prepared to give extra protection in front for winter, but found it quite unnecessary, as the house faces S.E., from which direction we get practically no driving rain or snow here, and East wind usually comes only during the early months of the year, when laying is not easily checked, and it did not seem to affect fertility. As to condensation, there is certainly more than from a wooden roof, but not any more than from plain super-felt, and not enough to damp the litter or cause any inconvenience.

This shed has only a rammed earth floor, as the whole thing was purely an experiment, but it has been so successful that I am now having two similar ones put up, with concrete floors.

This particular shed backs on to a 4 ft. 6 in. stone wall, and has a clump of fir trees protecting the greater part of it from hot sun from the West in summer, and gales in winter, so it is possible that a similar one in an exposed position might not give quite such good results, but some of my best trapnest records have been put up in this one, and there have been no colds or ailments of any kind.

Yours truly,
(Mrs.) J. M. GOODDEN.

THE SALE OF EGGS.

To the Editor of "Eggs."

Dear Sir,—Possibly the following would interest some of our members, and invite some helpful discussion :—

EGGS FROM 400 LAYERS. PER DAY.	MARKET PRICES. PER DOZ.
250	1/1
200	1/6
150	1/-
100	2/6
75	3/-
50	3/9
137½ average.	2/3⅔ average.
365	
48,032 per an.	

4,002¾ doz. at 2/3⅔	£466	8	6
Cost of Feed for 12 months at £17 ...	£204	0	0
Gross profit ...	£262	8	6

Yours truly,
A. MORTON NANCE.

SCIENCE AND POULTRY-KEEPING.

To the Editor of "Eggs."

Dear Sir,—I notice in your issue of the 17th inst. you advocate a closer collaboration between the scientist and the poultry breeder. This, I think, should be so, but first of all let the scientist come down from his pinnacle, and use less of his Latin names and a little more simple English when writing articles or lecturing. I feel sure that if this principle was adopted the average poultry-keeper would come forward more freely with their difficulties, and in many cases theories, which in all probability would not only lead to a better understanding, but would place in the hands of the scientist valuable information for further investigation; whereas at the present time the average person does not care to express his opinion or ideas for fear of being held up to ridicule through not being conversant with Latin names such as are used by the scientist. I am not raising this point altogether on behalf of the small poultry-keeper, but in many cases I find the breeder fails to understand their meaning. In drawing my letter to a close, I should like to suggest, if you could find space in "Eggs" to insert, a list of the most difficult names along with their more simple definition. This I feel would be of great service to the majority of your readers.

I remain, yours faithfully,
W. HIRST.

HARPER-ADAMS' AGRICULTURAL COLLEGE, NEWPORT, SALOP

POULTRY LAYING TRIALS—1924-1925.

Report for the Eighth Period.

The eighth month, covering the period May 16th to June 12th, shows a decline in egg production corresponding with the season, the output for all the birds being slightly less than 17 eggs per bird. This figure differs by a small fraction from the output for the corresponding period last year.

The condition of the birds continues satisfactory on the whole, a few deaths (ten in all) having occurred during the month. It is regretted that two of these occurred in Mr. McMahon's Leghorn Pen No. 32, which leads the Leghorn Section.

The following are the leading positions at the end of the eighth month:—

SUMMARY OF THE LEADING PENS.

Championship Trials.

Section 1. Light Breeds.—A. White (B.L.), Malpas, Cheshire, 1489 eggs; Miss N. H. Bell (W.L.), Ightam, Kent, 1498; Frank Snowden (W.L.), Keighley, Yorks., 1413; H. Sutton and Sons (W.L.), Preston, 1442; G. B. Metcalfe (B.L.), Lechlade, 1382.

Section 2. Heavy Breeds.—W. Lister (L.S.); Northiam, E. Sussex, 1477; E. Watson (W.W.), Colne, Lancs., 1493; G. B. Metcalfe (W.W.), Lechlade, Glos., 1490; Miss M. Fowler (W.W.), Blackburn, 1633; F. H. Collins (W.W.), Bewdley, Worcs, 1376.

SMALL FLOCK TRIALS.

Section 1. White Leghorns.—W. McMahon, Newton Mearns, Renf., 1003; J. and W. Purdie, Lanark, 973; F. A. Welch, Cheltenham, 944; H. Smith, Sheffield, 933; G. Keith Simmons, Honiton, Devon, 875.

Section 2. White Wyandottes.—D. W. Gunston, Reading, 1043; Allen Bros., Harrogate, 943; Frank Snowden, Keighley, Yorks., 903; Mrs. Alec Wilson, Breconshire, 902; Dr. A. Everson Harrison, Daventry, 886.

Section 3. Rhode Island Reds.—F. and A. H. Sanders, Rugby, 944; R. Green, Preston, Lancs., 877; Dashwood Farms, Ltd., Deddington, Oxon, 857; Mrs. Holloy, Antrim, Ireland, 919; E. Leslie Pattison, Longton, Staffs, 849.

Section 4. Sussex.—F. Rossall-Sandford, Shrewsbury, 834; W. Bradbury, Bury, Lancs., 849; Capt. A. A. Plimpton, Beverley, E. Yorks, 888; A. Hughes, Malpas, Cheshire, 849; A. Robinson, Bawtry, Yorks., 858.

Section 5. Black Leghorns.—W. A. Lansley, Whitchurch, Salop, 845; Mrs. M. B. Cowley, Abingdon, Berks., 843; C. L. and J. A. Thomson, Holywell, 856; Wilson Beattie, Rothersthorpe, Northants, 810; J. H. Hodkinson, St. Ives, Hunts., 787.

Section 6. Any Other Light Breed.—Storer Bros. (An.), Manchester, 815; H. Lynden Lemon (La Br.), Devizes, 813; W. Hamnett (An.), Blackpool, 792; Stanley Street-Porter (An.), Ely, Cambs., 802; Dr. R. B. Reed (An.), Colchester, Essex, 811.

Section 7. Any Other Heavy Breed.—Miss P. Mills (Rks.), Bishop's Castle, Shropshire, 943; F. R. Welch, (Rks.), Bewdley, Worcs., 849; O. C. Brown (Rks.), Scunthorpe, Lincs., 881; Miss M. Fowler (B. Orp.), Blackburn, 795; P. E White (Rks.), Market Drayton, 803.

SINGLE BIRD TRIALS.

Section 1. White Leghorns.—W. Hamnett, Blackpool, 184; W. M. Golden, Leire, Rugby, 181; S. E. Illingworth, Bradford, 173; N. S. Robinson, Spilsby, Lincs, 166; J. Potter, Wigan, 167.

Section 2. White Wyandottes.—Mrs. Alec Wilson, Garth, Breconshire, 188; S. Street-Porter, Ely, Cambs., 168; A. Hughes, Malpas, Cheshire, 168; S. and T. Greenall, Grantham, 168; W. Barron, Preston, 165.

Section 3. Any Other Light Breed.—S. Street-Porter (B.L.), Ely, Cambs., 163; A. White (B.L.), Malpas, Cheshire, 152; R. A. and A. M. Johnson (B.L.), Chalford, Glos., 155; W Hamnett (An.), Blackpool, 146; Chivers and Sons, Ltd. (B.L.), Histon, Cambridge, 148.

Section 4. Any Other Heavy Breed.—T. Barron (R.I.R.), Preston, 165; W. M. Golden (L.S.), Leire, Rugby, 156; R. Green (R.I.R.), Preston, 160; A. White (L.S.), Malpas, Cheshire, 155; O. C. Brown (Bf. R.), Scunthorpe, Lincs., 149.

London Market Advice Table.

By **A. V. CLARKSON.**

JULY, 1925.

We have now arrived at the commencement of the Holiday Season, and it is up to every producer to use his endeavours to dispose of all or part of his surplus cockerels to the nearest seaside or holiday resort where possible. By this means he will obtain a higher price than he would do on the London Market, which suffers owing to increased supplies and the exodus of holiday makers, and for these reasons can hold out no hopes of an increase on the present realisation prices.

Large Spring Chicken.—The demand is for a bird scaling 3lbs. or over, and these will meet a steady demand and keep fairly firm in price. If sent dead it is essential that the birds be clean plucked. Should the weather be hot, it will be to the producer's advantage to draw the gut to prevent the birds turning green during transit. Extra care should be taken to thoroughly cool the birds before packing, and a well-ventilated crate should be used to send the goods in.

Surplus Cockerels.—The London Market can dispose of any class of bird, but it is really unwise to send cockerels smaller than 1½lbs. for the light breeds, and 2lbs. for the heavy breeds.

Old Hens.—All hens should be sent alive. It is wise when sending to pack the heavy breeds separate from the light breeds. The latter do not realise so much as the former, for the reason that they average only 3½lbs. alive, and one will readily see that a year or a two-year-old hen that only scales 3lbs. when dead, cannot carry much meat. In addition, it must be borne in mind that there are a tremendous number of light breeds in existence in comparison to the heavy breeds, and I would like to draw the readers' attention to this fact that when making his breeding arrangements it would be as well to take into consideration the fact that at the end of his operations his realisation figures will be much lower if he is working on the light breeds than it would be if he were working on the heavies. The London Market invariably does better than local markets with the light breed hens.

Duckling.—The only demand on the London Market is for a white duckling scaling 4lbs. or over when killed and clean plucked, and these birds need a little extra attention in cooling and packing during the hot weather. It does not pay to send runner or coloured ducks to the London Market killed and plucked

Eggs.—New-laid eggs continue in steady demand with a slightly increasing price and it is essential that producers take care that their eggs are sent to market as early as possible. It is far better to send a small quantity often than a large quantity at intervals, because nothing is more disastrous to sender, salesman and retailer as an egg that is not fresh.

Rabbits.—Many farmers live in a district where rabbits are very plentiful. The London Market will later on require large quantities of rabbits, and, believing that to be forewarned is to be forearmed, I would suggest to the people so situated that they make judicious inquiries in their district, to see if it is possible for them to buy the rabbits from the big farms or estates in their own district. The writer's experience is that there are hundreds of dealers who make a lot of money by buying these rabbits (some even buying from the local market) and sending them to London. The prices that they pay are invariably much lower than the London Market realises, and it will be seen that to a man who takes the trouble to understand the rabbit trade there is a chance of earning a lot of money. The writer will be only too pleased to give further information to anyone interested, and although this advice is given in July, and rabbits are not wanted yet, if any member of the S.P.B.A. is going to take the matter up, it is time he started making his inquiries in both directions, otherwise he will find that the local dealers have already out him out.

OUR FRONT COVER.

The photograph on our front cover this week is of Hen No. 30, "Pensford Prolific," which has a record of 721 in three years, the property of the Misses Ransford.

Particular attention is given by the Misses Ransford to size, type and hatchability. The persistency of their layers is proof of constitution and vigour, and size has been increased in conjunction with heavier production. The results of correct feeding and management are shown in their stocks' large frames and fine texture. Hatchability has been extraordinarily good from all breeders. To give two recent examples:—90 per cent. from eggs sent to Scotland and 188 splendid chicks from 250 eggs sent to Ontario, Canada. Regarding the latter, very favourable remarks were made as to size and liveliness of the chicks, and to the fact that they had hatched better than any native stock. Pedigrees and records date back to 1914—full details of every bird being most carefully kept throughout its life.

EGG-LAYING TEST.

GLOUCESTERSHIRE REPORT.

The following is the report on the Gloucestershire Laying Test, under the supervision of Mr. L. G Price, County Instructor in Poultry Keeping, for the eighth month ended May 22nd:—

During the past month 6,132 eggs have been collected, against 6,309 the previous month, giving a total of 39,288 for the eight months, and an average of 123.2 in respect of 319 pullets. The slight decrease is still due to excessive broodiness in the heavy breeds. The general health of the birds is good.

Figures for Leading Pens.

Section A. (1). White Wyandotte (Professional).—(Five birds constitute a pen).—P. M. Hinton, 3061; H. Ludlow Hewitt, 2968; H. Bennett, 2925; H. W. Fowles, 2834; E. J. Stone, 2765; J. E. Boyd, 2707.

Section A. (2). A.O.V. Heavy Breed. (Professional).—Miss M. Lawrence (R.I.R.), 3065; J. G Herbert (R.I.R.), 3027; W. R. Partridge (R.IR.), 2982; G. H. H. Simmons (L.S.), 2973; M. C. Beale (R.I.R), 2833; C. G Young (R.I.R.), 2628.

Section A. (3). A.V. Light Breed. (Professional).—Miss H. Baylis, 3181; Miss N. Townsend, 3164; Sherborne Park P.F., 3003; Cotswold Pedigree Farm, 2944; F. A. Welch, 2860; G. H. H. Simmons, 2848.

Section B. (1). A.V. Heavy Breed. (Confined to owners of not more than 50 laying head).—Maisemore School (W.W.), 3196; A. W. Moses (L.S), 3110; Miss M. Brown (W.W.), 2878; L. Grist (W.W.), 2622; R. T. Miles (B'Veld), 1340.

Section B. (2). A .V. Light Breed. (Confined to owners of not more than 50 laying head).—C. E. Skirten, 2837; L. Grist, 2721; Miss M. Brown, 2456; J. D. Crewdson, 2412. All White Leghorns.

Pen Duck Section. (Four ducks constitute a pen).—G. H. H. Simmons (K.-C.), 549; G. B. Young (K.-C.), 500; S. J. Phillips (K.-C.), 498; Major J G. Dugdale (K.-C.), 481; Sherborne Park P.F. (K.-C.), 418, W. R. Partridge (W.R.), 413.

SINGLE PEN SECTION.

Section 1. White Leghorns.—Miss N. Townsend (5), 729; L. Grist (13), 699; Miss K. Feavlour, 681; G H. H. Simmons, 676; L. Grist (6), 567; Miss N. Townsend (19), 666.

Section 2. White Wyandotte.—H. W. Fowles, 764; W. R. Partridge (34), 744; Lord Sherborne (37), 700; W. R. Partridge (38), 705; G. H. H. Simmons (31), 664; Philip Clapham (36), 657.

Section 3. Rhode Island Red.—Miss Lawrence (59), 722; G. B. Metcalfe, 628; Miss M. Lawrence (42), 521; S. Barnes, Junr. (48), 517.

Section 4. A.O.V. Light Breed.—Churchdown P.F. (An.), 678; H. W. Stephens (B.L.), 476; G B. Young (B.L.), 467; Miss M. Johnson (W. la B.), 428.

Section 5. A.O.V. Heavy Breed.—Miss M. Lawrence (Buff R.), 696; G. H. H. Simmons (Buff R.), 672; Mrs. E. Weinholt (Aus. Orp.), 638; Lady Bledisloe (Aus. Orp.), 595; Major J. Dugdale (58) (L.S.), 554; Miss M. Johnson (L.S.), 536.

Section 6. Ducks.—Mrs. H. L Hanks (K.-C.), 217; H. W. Fowles (K.-C.), 193; F. L. Walters (7) (W.R.), 157; Mrs. W. Pearce Ellis (K.-C.), 155; W. R Partridge (14) (W.R.), 149; W. R. Partridge (15) (W.R.), 146.

(Signed) **R. A. and A. M. JOHNSON.**

Autumn Hatching.

By **LESTER SPURGEON.**

I am asked from time to time whether it pays to try and rear autumn-hatched White Leghorns for commercial egg production. I am sorry to say I have not yet had the courage to try the experiment. Generally one big rearing season is enough for me! This I can say in connection with some heavies we had at one time—Buff Orpingtons they were. I was hen-hatching a large number of their eggs during July and August, and in late September the resulting chicks were placed in colony houses out on the stubble, and without any special attention they grew and came into egg production as soon as the late May-hatched White Leghorns They also developed to such an extent that one could not tell they were summer-hatched birds.

Whether it would pay for commercial egg production to start up one's incubator and the brooder in the autumn, I cannot feel certain. It would mean that the breeding pen would have to be mated up with either fresh cockerels, or with thoroughly rested ones. My experience goes to prove that eggs from birds that have been in full production all the summer can produce fine strong chicks in autumn, and that one would expect seeing the hens are slackening off, and are not turning out so many eggs as in the spring, and a good many of the hens have rested by reason of a bout of broodiness.

It would only be safe to make the attempt by artificial incubation, where the inside temperature of the incubator house was not much affected by the outside temperature, but often when it comes to starting up a glass-fronted brooder house, it is a matter that needs very careful consideration, and then there is the question of using ground that had been run over by the last batch of chicken from the season's hatch. I am certainly in favour of autumn hatching where conditions permit, and where brooding can be carried on on fresh and shady ground.

The autumn hatching of heavies for killing in spring can be a profitable side-line. In a smallish way we have always done it by natural methods—that is putting as many hens down at one time as possible, and then condensing the resulting chicks by placing any number from twenty to forty under one hen, or rather with one hen. I believe we have given as many as fifty chicks to one hen, since they need little brooding in warm weather.

A successful method is to put the hen with this large number of chicks in a house six by four, the floor of which is well bedded down with peat moss litter, and the birds are kept in until the dew is off the grass, and in a house this size they can be kept in for a day or longer during wet weather. It is surprising how little attention a few batches of chicks housed in this way require at this time of the year. A good water supply and suitable food thrown to them extra to the dry mash twice daily, and the old hen will work and keep them supplied with dainty morsels all the day.

For those who wish to try this let me emphasise the necessity for the essentials—a good-sized house

(Continued at Foot of Column Next Page).

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, JUNE 26th, 1925.

GRAIN AND FEEDING STUFFS.—British wheat meets a quiet trade and is easier in price at Bristol and Hull, the average quotation now being 12s. 4d. per cwt. Imported is also reduced, especially Argentine and Australian which record reductions of from 4d. to about 1s. per cwt. on the week. Feeding barley is in little request and prices generally are slightly easier. Homegrown oats are unchanged, except at Liverpool, where white varieties are reduced 3d. per cwt., while imported descriptions are mostly in slow request at about recent quotations. Maize meets a limited inquiry at lower values, the average quotation for Argentine being 10s. 3d. per cwt., a decline of 4d. per cwt. on the week

Offals are practically unchanged at most markets, but at Hull bran and coarse middlings are reduced 10s. per ton on the week. Meals also show little alteration in value, except for maize products, which are cheaper at the majority of markets. Oil cakes meet a limited inquiry, and at London some descriptions of linseed cake are quoted at 2s. 6d. per ton less.

MILLERS' OFFALS.—Bran (British): Bristol, £7 17s; Hull, £6 2s; Liverpool, £6 15s; London, £6 10s. Broad Bran: Bristol, £9 17s; Hull, £7 2s; London, £8. Middlings—Fine (Imported): London, £9 2s; Coarse (British): Bristol, £9; Hull, £7 15s; Liverpool, £8; London, £7 10s. Pollards (Imported): Bristol, £7 12s; Hull, £7; Liverpool, £7; London, £7 5s. Rice Bran: Bristol, £7 17s; Liverpool, £7 5s; London, £7 15s. MEAL.—Barley Meal: Bristol, £11 15s; Hull, £11 13s; London, £12. Maize Meal: Bristol, £12 12s; Hull, £10 17s; Liverpool, £11 2s; London, £11 10s. Maize Meal (S. African): Bristol, £10 10s; Hull, £9 15s; Liverpool, £9 10s; London, £8 15s. Maize Germ Meal: Bristol, £10 15s; Hull, £9 10s; London, £9 10s. Maize Gluten Feed: Bristol, £11; Liverpool, £9 10s; London, £10. Locust Bean Meal: Bristol, £9 15s; Hull, £9 15s; London, £9 15s. Bean Meal: Bristol, £13 15s; Hull, £11 18s; London, £13. Fish Meal: Bristol, £20 10s; Hull, £19; Liverpool, £18 10s; London, £19 10s.

EGGS AND DEAD POULTRY.

British eggs are rather dearer on the week, but most other descriptions mark a decline, although supplies are on the short side.

Week-end Prices—Eggs (per 120): British, 14s 3d, 12s 6d; Irish, 13s 9d, 12s 6d; Dutch, 15s 3d, 14s 6d; French, 14s 9d, 14s 0d; Belgian, 13s 9d, 13s 0d; Italian, 12s 6d, 12s 0d; Lithuanian, 11s 6d, 10s 6d: Russian, 10s 3d, 8s 9d.

Dead Poultry (per lb.): Fowls—Surrey, 2s 0d, 1s 6d; Irish, 1s 6d, 1s 2d; Others, 1s 9d, 1s 4d. Ducks, 1s 5d, 1s 2d.

EGGS.

Per Doz.—Ashford: First, 1s 9d; Second, 1s 8d. Birmingham: First, 1s 4¾d; Second, 1s 4¼d. Bridgwater: First, 1s 8d; Second, 1s 7d. Chelmsford: First, 1s 8½d; Second, 1s 6½d. Colchester: First, 1s 8½d; Second, 1s 6½d. Doncaster, First, 1s 6d. Dorchester: First, 1s 7¾d; Second, 1s 6½d. Exeter: First, 1s 5d. Hereford: First, 1s 4d. King's Lynn: First, 1s 6d; Second, 1s 5d. Llandilo: First, 1s 3d; Second, 1s 2d. Mold: First, 1s 5d; Second, 1s 4d. Montgomery: First, 1s 5d Newport (Mon.): First, 1s 6d; Second, 1s 5d. Norwich: First, 1s 6d. Oswestry: First, 1s 6d. Penzance: First, 1s 3d; Second, 1s 2d. Saffron Walden: First, 1s 9d. St. Ives (Hunts): First, 1s 7¼d; Second, 1s 6d. Salisbury: First, 1s 9½d; Second, 1s 8½d. Skipton: First, 1s 4d. Truro: First, 1s 3d. *Carlisle: First, 1s 4d. *Derby: First, 1s 5d. *Ipswich: First, 1s 8d; Second, 1s 3d. *Lincoln: First, 1s 4d. *Shrewsbury: First, 1s 3d; Second, 1s 2d. *York: First, 1s 6d; Second, 1s 5d.

FOWLS.

Per lb.—Birmingham: First, 1s 7d; Second, 9d. Doncaster: First, †5s 0d; Second, †4s 0d. Exeter: First, 1s 8d. Hereford: First, 1s 6d. Llandilo: First, 2s 2d; Second, 2s 0d. Newport (Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 5d. *Derby: First, †5s 6d; Second, †4s 0d. *Ipswich: First, 2s 0d; Second, 1s 10d. *Lincoln: First, †5s 6d; Second, †4s 0d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: First, †5s 6d; Second, †4s 6d.

DUCKS.

Per lb.—Birmingham: First, 1s 8d; Second, 1s 4d. Doncaster: First, †5s 6d; Second, †5s 0d. Exeter: First, 1s 7d. Hereford: First, 1s 4d. *Derby: First, †6s 0d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

“Eggs.”

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, July 1st, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of “Eggs” to their poultry-keeping friends.

Subscriptions to “EGGS,” 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, “Eggs,” 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of “Eggs,” it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

AUTUMN HATCHING—Continued.

well littered, and dry earth, answers as well, if not better, than peat moss litter, a plentiful and constant water supply, good food and shady ground on which to run out. Don't let the chicks out in long wet grass or in bad weather, and keep the grass short if you possibly can. Good healthy chicks cannot help thriving if these conditions are given them, and if you can't get these conditions don't attempt autumn hatching.

Duck breeders, doubtless, take full advantage of Biddy as a brooder, and we do not hesitate in placing twenty or more Aylesburys with one hen. This one can do quite early in the season, since ducklings require far less brooding than chicks.

Classified Advertisements.

(PREPAID RATES).

1d. per word—minimum charge, 1s 0d. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS, per line, extra 9d.
DAY-OLD CHICKS, „ „ 1s.
DAY-OLD CHICKS „ „ 1/6

The number of letters, punctuations and spaces between words should be totalled, when the following table will be of assistance:—

9d. size allows for Thirty-one to one line.
1/- size allows for Twenty-seven to one line.
1/6 size allows for Twenty-one to one line.

When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

N.B.—Advertisements, unless accompanied by correct amount, will not be inserted.

Advertisements must be distinctly marked with the Heading under which they are to appear.

Advertisements must be written on a separate sheet of paper, and one side of the paper only.

Name and Address to be counted. In the case of a Box Number being used, the words, "Box," "Eggs," 94, Farncombe Street, London, S.E.16, to be counted as eight words, i.e., making a total extra charge of 1s. 8d. (1s. for Box; 8d. per address) per insertion.

Advertisements must reach this office
FIRST POST FRIDAYS
for insertion in the following Wednesday's issue. Those received after this time will be inserted in the next issue.

PLEASE WRITE CLEARLY, and TO AVOID MISPRINTING OF STRAINS, NAMES AND ADDRESSES, THESE SHOULD BE WRITTEN IN PRINTED CHARACTERS.

Displayed Advertisements.

Ordinary Page, £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 6d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Position by arrangements. Discounts for Series. Full Scale of Advertising Rates on application.

Advertisements, addressed to Mr. S. H. BURLES, "EGGS," 94, FARNCOMBE STREET, LONDON, S.E.16, MUST REACH US BY FIRST POST FRIDAY MORNINGS, for insertion in following issue. Those received later will be inserted in the next issue.

A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to The Beeches, Rudgwick, Sussex.

EGGS.

FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C., Longwick P.F., Princes Risborough, Bucks. R.I. Reds, White Leghorns. Eggs, Chicks, Stock Birds. List free. Satisfaction insisted on. (See under Ducks and Drakes also).

EGGS AND CHICKS.

FOR SALE.

R. H. Berney, M.A., Cantab, offers Sittings of Eggs in W. Runners, and W. and F. Runners; all related to Laying Test Winners; from 5s. per sitting.—West Common, Harpenden.

Watson Bros. offer splendid value in Eggs for Hatching and Day-Old Chicks. Having spared no expense to procure the very leading strain to stock our 25-acre farm, Watson Bros. claim to be in the position to give you what you require in both quality and quantity promptly, having an incubating capacity of thirty thousand eggs on the farm, or eggs for hatching from none but free-range birds. We stock Black and White Leghorns, Anconas, Rhode Island Reds, and White Wyandottes. Prices: Chicks, 10s. for 12, 20s. for 25, 40s. for 50, £4 per 100; Eggs, 5s. for 12, 10s. for 25, 20s. for 50, 38s. per 100. Special Pen, Chicks, 15s. per 12; Eggs, 7s. 6d. per 15. Special offer of 50 Chicks and reliable Brooder complete, wood or galvanised, 57s. 6d. Your own selection in all offers. Sent carriage paid in free packages; live delivery guaranteed; eggs not replaced.—Watson Bros., Weasal Hall Farm, Hebden Bridge.

Bryn Poultry Farm, Bishop's Castle, Salop.
(P. Mills).
1st HARPER-ADAMS. BUFF ROCKS, White Wyandottes, Light Sussex. Eggs from 4s. doz. Chicks, 12s. First Cross, 10s. Six weeks old Pullets, 42s.

Ful-O-Pep Laying Mash
and
Ful-O-Pep Growing Mash
are renowned the world over for producing profitable poultry.

FUL
TRADE -O- MARK
PEP

POULTRY MASHES

NO MIXING: NO HEATING WATER: NO TROUBLE

Write for the revised edition of the Ful-O-Pep Handy Monthly Guide—the most valuable book on Incubation, Rearing and Poultry Husbandry. This book has detailed suggestions for every month in the year. Also 12 monthly egg charts for you to record your eggs. Sent free and postage paid.

Ful-O-Pep Poultry Feeds are made and guaranteed by Quaker Oats Ltd., 11 Finsbury Square, E.C.2.

EGGS AND CHICKS.

FOR SALE.

BEST STOCK AT LOWEST PRICES
Now is the time to buy Eggs or Day-
Chickens at the lowest possible prices
the highest quality stock. Our stock
famous for its hardiness and heavy-layi
powers. Trap-nested strains of R.I. Re
White Wyandottes, Light Sussex, B
Sussex, Buff Orpingtons, Barred Roc
White Leghorns, Black Leghorns, Ancon
EGGS: 5/-, 12.
10/-, 26; 17/6, 50; 30/-, 100.
Our Breeding Flock of nearly 5,000 Select
Birds is the product of 18 years' breedi
for laying powers and stamina.
CHICKS: 10/-, 12;
20/-, 25; 37/6, 50; 70/-, 100.
Thousands of our chickens have been se
to customers throughout Great Brita
and repeat orders are received dai
testifying to the complete satisfacti
invariably given by our stock. You cann
buy better or stronger chicks at a
price. Send for Free Illustrated Catalog
EASTMAN BROS.,
SUFFOLK POULTRY FARM,
HADLEIGH.

PULLETS.

FOR SALE.

Captain Strong, R.N., offers Black Le
horn 1925 Pullets and Cockerels; sound
colour, lovely yellow legs.—Apply, Hill
ton Poultry Farm, Bow, Devon.

SISTERS SILVER MEDAL WINNER
BENTLEY, 1923, R.I.R.
Sire's dam, 283.
BLACK LEGHORNS, SNOWDEN'
238-260. Sire's dam, 266.
WHITE LEGHORNS, CAM'S.
200-260. Sire's dam 275. All Pullets tra
nested. Chickens, £3, 100; Eggs, 25s., 1
Two and Three Month Pullets, 7s. and 9
Cockerels, 4s. and 6s each. Quantiti
cheaper.—Ekins, S.P.B.A., Grange, Wellin
borough.

1925 PEDIGREE PULLETS.
RHODE ISLAND REDS.
Mrs. A. J. Moore's large egg strain. T
best strain of "colour" with "eggs."
BUFF ROCKS.
Splendid colour and health. Carriage pa
on 10 birds. Approval. Cash or depos
with Editor.
R. S. KEEP,
EAST BUDLEIGH,
DEVON.

BLACK LEGHORNS.
GOLD AND SILVER MEDAL WINNERS.
EIGHT-WEEK-OLD PULLETS
FROM 6s. 6d.
Twelve weeks old, 15 per cent. increas
well grown birds; large egg strain.
ALLDAY and RAWSON,
Poultry Dept., Fotheringhay Manor Far
Peterborough.

PHILIP CLAPHAM.
My surplus of Cheaper Three Months Pu
lets is now sold. I have a few to spa
from trap-nested hens, by cockerels fro
-H.-A. Gold medal Pen, at 21s., 15s., an
12s. 6d. Send for my free catalogue.
Sherriffs Farm, Lyonshall, Herefordshire.

DERRINGSTONE
RHODE ISLAND PULLETS.
We are now booking orders for th
Autumn for our early-hatched Pullet
Wonderful colour and excellent winte
layers. Quotations and particulars o
application.—Percival F. Gleed, Derrin
stone Poultry Farm, Barham, near Cante
bury.

EG

Wednesday, July 8th, 1925.

EGGS

THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

egistered at the G.P.O. as a Newspaper.
ol. XII. No. 2. Copyright.

Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months „ „ 6/4
Three Months „ „ 3/3

EXTENSIBLE UNIT BUILDINGS

Beginner's Nucleus of a large-flock house—i.e., 20 ft. x 15 ft.—for brooding and rearing 400 chicks in one or more flocks, or for 80 pullets. Above house is raised high of ground owing to heavy clay, but may be placed flush with ground. (Patd. and Regd.)

If your brooding has been erratic, or if your pullet egg yield is not up to 200 average, consult me. Many clients have reared chicks with 5 per cent. max.. all-in loss, and raised their flock averages from 150 to over 200 eggs without extra expense.

Please mention "EGGS."

W. H. COLT, M.N.U.P.S., M.S.P.B.A.,
Bethersden, nr. Ashford, Kent.

PRIEST AND SHAW

UNDER ROYAL PATRONAGE ✦ ALWAYS WINTER EGGS ✦ I.O.W.

Sandown, I.W.

Why You should buy Our Pullets

WYANDOTTES. LEGHORNS.

BECAUSE

These birds are early hatched, and lay when eggs are scarce and dear.

Only strong, healthy birds, selected for laying qualities, are sent out.

The birds are reared under ideal conditions, and fed the best foods, so are fitted for any climate.

It is our business to save you the cost and trouble of rearing, and send you the goods ready for work.

WRITE FOR OUR 1925 PRICE LIST.

Compelling Reasons Why

You Must introduce the "Heydown" Strains on to your Farm

The day has passed when breeding stock was chosen on the strength of high records alone. High fecundity without stamina can only make for retrogression.

Nowadays, the discerning buyer demands a satisfactory answer to the following vital questions before making his choice:—

1. Are the parent birds blood-tested and proved non-carriers of disease?
2. Are they from progeny-tested and individually-recorded stock?
3. Is the price one which allows of a reasonable profit?

It is because the "Heydown" strains comply with all these demands that they are to be found on many hundreds of active money-making establishments throughout the British Isles.

John H Dowden & Son were the pioneer large breeders to blood-test the whole of their breeding stock. They trap-nest 2,000 pullets and hens throughout the year. It is this combination of fecundity with stamina which helps to make the "Heydown" strains Pre-eminent.

We now offer 1924 hens, three months old pullets, and individually recorded cockerels in our five varieties:—W.L., W.W., R.I.R., B.L., & L.S.

JOHN H. DOWDEN & SON,
Heydown - Heathfield - Sussex.

The "ECLIPSE" Poultry Houses.

The Increasing Demand for these Excellent Houses has necessitated the Removal of our Business to more Commodious Premises.

Our New Address is ☞

Perivale Poultry Appliance Works,
East Harling,
Attleborough, Norfolk,

Where we now have facilities for dealing expeditiously with all Orders placed with us.

HERBERT W. MARTIN,
LATE OF ROCKLAND ST. PETER.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, JULY 8th, 1925.

Editorial.

THREE LETTERS.

The following extracts are taken from three letters which we have recently received :—

(A) " Do you really believe there is a chance at the present time to make £4 a week from poultry? I have four acres of land.".

(B) " The puzzling thing to me is why so many poultry-keepers go ' broke.' Only yesterday a Sheriff's man told me he had served more summonses on poultry farmers than any other tradesmen—mostly taken out by the corn merchants ; yet I see that poultry appliances are still as expensive, and everything appertaining to the poultry industry is certainly very dear. One would imagine that with so many failures in this line of business, that poultry appliances and all things relating to the same should be much cheaper."

(C) " In reply to yours, in which you answer my question as to the nett profit per head to be made from Commercial Egg Farming. You say about six shillings per head, and hint that it is not a profitable field for failures in other walks of life to explore. Thank you. Perhaps you will allow me to ask whether you have not made a very great mistake. I have been assured by an **expert** the nett profit would be approximately 15s. per head."

We may answer the first question by assuring our correspondent that it is possible to make £4 a week from poultry on four acres of land, and that a really competent man would do it without any great difficulty, even at the present time; but, as we do not know him, we could not assure him that he personally would make that sum, or even make both ends meet. It is so common to receive letters from beginners in which they say they are hard workers, enthusiastic, love the country, etc., and who believe that, possessed of these blessings, success must necessarily follow. How many scores of them have been bitterly disappointed, and have joined those who assert that poultry farming is unprofitable?

The second letter is both curious and interesting. If our correspondent had any knowledge of the poultry industry, he would not be in the least bit puzzled as to why so many poultry-keepers go " broke." The one thing that is puzzling, and will always be puzzling, is why so many people believe it is an easy and pleasant means of making a livelihood. Is there any other business into which they would drift without endeavouring to gain some experience, without trying to find out the amount of capital required, or the best means of laying out the capital, often far too little, which they had to invest? It will hardly be believed when we say that we were called in to advise on one farm, where anthracite stoves had been purchased sufficient to brood 12,000 chicks, as a start, yet it is a fact, on another, where all the available capital was spent on incubators and breeding stock, and not a penny left for brooders; on another, where a bad outbreak of diphtheritic roup occurring in a flock of 500 birds in an army hut, the healthy were separated from the sick and placed in one half the hut, and the only division between the two was a piece of wire netting. These can hardly be regarded as typical examples it is true, but it is indisputable that the great majority of the failures in poultry farming are due to the fact that those who make the venture so light-heartedly are ill-equipped for the task, either lacking experience, knowledge, sufficient capital, aptitude or business ability. When things become difficult or desperate, the expert is called in to advise, and it is generally too late to be of any real help.

One can hardly see why the failures should lead to a reduction in the cost of appliances. The costs of manufacture and material have not been appreciably reduced, and we think appliance makers have fairly met us wherever possible. One point, however, is of the greatest importance, and that is a reduction in establishment costs. This would appear to contradict the previous assertion that manufacturers have fairly met us, but that is no so ; the whole question needs investigation, and if it were thoroughly examined some of the ideas we hold to-day might be very much modified.

The third question is amusing. We can assure our correspondent that the hint that egg farming was not a profitable field for failures in other walks of life to explore was not intended to be personal. We answered an explicit question as to the prospects of egg farming, and remarked

(Continued at Foot of Column Next Page).

The use of Poultry against Farm Pests.

By A. ROEBUCK

(Adviser in Entomology, Midland Agricultural College).

(*Continued*).

PEA AND BEAN WEEVILS (Sitona Lineatus and others).—Most people will have noticed semi-circular notches eaten from leaves of Peas, Beans, Clover, Lucerne, or Vetches. Sometimes the leaves present a very jagged appearance; at other times they are almost destroyed. This is the work of a number of beetles of the genus Sitona. While the actual species varies somewhat with the district, the chief pest is Sitona Lineatus. The various kinds are much the same in appearance and size, being about a quarter-of-an-inch long, and of a brown or grey-brown colour. Adult beetles are found all the year round, usually well within reach of fowls. They hibernate during the very cold months, but start feeding very early in the year, and continue rather late. They are on the plants during the day, but are very timid and alert, dropping to the ground on the slightest sign of alarm. On the ground they remain motionless, and their colour corresponds closely with that of the soil, rendering them almost invisible. As the leaves are responsible for growth of plants by making the food, the loss of leaf surface causes depression of the crop, which is sometimes considerable with this pest. In the case of clover and lucerne it is direct loss of weight. In addition the grubs feed for about six weeks on the roots of peas, etc., doing still further damage. They are, of course, beyond the reach of fowls.

From time to time batches of adults have been fed to fowls, and in all cases they have been eaten at once. In addition, plants with these beetles on the tops have been placed near fowls in runs, and the birds have gone over these carefully and pecked off all the beetles.

The pests are very difficult to combat in any way, and fowls appear to the writer to offer the best measure of control on a field scale. The best way to combat these with fowls is to run the birds over the pea and bean stubbles immediately the harvest is done. The new beetles are then hatching from the ground, the old generation having died off. Some are carted away to the stacks, and these are partly eaten by fowls in the yards during the winter and spring. The beetles migrate from the pea and bean stubbles to feed on the clover or seed crops, or winter vetches until the frosts come. After a short stay on the pea stubbles the birds may, therefore, be moved to the seed crops. When the hard frosts stop the beetles feeding they shelter under the grass or under stones, etc., and can still be reached by fowls. When the fine weather comes the beetles feed a little on the clover, but as soon as possible they go to the peas or beans, as they prefer these for breeding. Fowls may then be removed, say, sometime in April. By attacking the beetles at the period stated, they are destroyed before they lay eggs. Any loss of greenstuff by the fowls at this time of the year will be balanced by the increased growth made subsequently, due to the manurial effect of the birds, while the protection of the subsequent pea and bean crops should be more or less complete, according to the number of birds ranging the stubbles and the number of beetles eaten.

CHAFER BEETLES—Cockchafer (Melolontha Vulgaris), Summer Chafer (Rhizotrogus Solstitialis), Garden Chafer (Phyllopertha Horticola), Rose Chafer (Cetonia Aurata). On some lands, especially near woods, pasture fields, arable fields, ploughed up from such pastures, and forest nurseries, much damage is done to the roots of the crops by the large grubs of these beetles. Some of them also occur in gardens. The roots of almost anything are eaten by them. The grubs are very much alike, whitish, with a brown head and six legs; very fat, soft and wrinkled. When full grown the cockchafer grub is over two inches long and three-quarters of an inch wide.

This is the largest, and the Garden Chafer is the smallest, with a length just over half-an-inch. The first three are very common, but the last is more local. Whereas the summer and garden chafer grubs are found from late summer to the following spring, the other two species take several years to mature, and hence the grubs are found all the year round.

From time to time the grubs of all four species have been fed to fowls, and they have always been eaten readily. In nature, however, it must be remembered that they are below ground, and, therefore, cannot be

EDITORIAL.—Continued.

that practical experience was necessary to success, and that too often it was looked upon as an easy means of livelihood by those who had not succeeded in other ways. This remark appears to have been rather unpalatable. This is the third time within six weeks that we have been told of this expert who affirms that a nett profit of 15s. per bird can be made from egg farming, and we should very much like to make his acquaintance and discover whether he is running a farm himself. How many have been induced to embark on poultry farming by the prospect of such profits as these. One can imagine the calculations made, 1,000 birds at 15s. nett profit—£750 a year. If reliance is placed on this expert, disillusionment will be speedy and painful. If the writer of the first letter has four acres of ground, there is no other branch of agriculture to our knowledge to which he would obtain such a satisfactory return as from poultry. The best advice we can give him is to go slow. Obtain the best advice to start with, and see that his expenditure on stock and plant is not too heavy. There is not the least necessity in starting a farm of this kind to pay the highest prices for stock, as so many have done, only to realise later that their knowledge and experience has been insufficient to make the best use of it. He should get the advice of an expert now to tell him what he actually needs, and how to plan his farm to the best advantage. The mistake generally made is to call in the expert when the wherefore to get what is needed is not available.

reached by fowls except during ploughing, digging, etc. The writer has seen many fields which would have been greatly benefited by allowing fowls to run on the land during tillages. A few adult beetles of the first two species have been fed. In the case of the Summer Chafer they were eaten, but not the Cockchafers. As these two species are evening fliers, and rest in trees during the day, they are not likely to be caught by fowls. The most promising method of combatting these pests is to have birds on the fields during the Autumn and Spring ploughings.

Diamond Barked Moth (Plutella Maculipennis). This pest appears at uncertain intervals, being exceptionally serious some years, and absent on crops during the intervening periods. Turnips and swedes are the special crops attacked. The small moths lay eggs underneath the leaves in June and July, and the caterpillars remain in this position, riddling the foliage. When full grown they reach about half-an-inch in length. Rustling the leaves causes them to throw themselves into the air on silken threads. Two or even three broods of caterpillars occur before the end of the growing season. It is an entirely different pest to cope with, but fowls will readily eat the caterpillars, and, moreover, they will do very little or no damage to the growing crops. When this pest threatens to be at all serious it appears to be good practice to turn fowls on to the fields.

(To be Continued).

What our Readers think of "Eggs."

Cumrew, Heads Hook, Carlisle.

Dear Sir,—In conclusion may I take this opportunity of expressing my appreciation of "Eggs" with hearty congratulations to the Editor.

Yours faithfully,
(Signed) J. T. POYNTER.

Oldfield, Eversley Park Road, Winchmore Hill.

Dear Sir,—I may say I have only just discovered that "Eggs" is just the book I have been looking for.

Yours truly,
(Signed) J. DAFFARN.

Cherry Orchard Cottage, Bromley, Kent.

Dear Sir,—I must, in conclusion, express my deep gratitude to you for the sound advice you give in "Eggs." It has been of the greatest use to me, and my chicks and adult stock are all raised and fed on your formulas, to my considerable profit and the birds' health and stamina.

Yours very truly,
(Signed) HERBERT BINNEY.

Whiting Farm, Roman Road, Guston, nr. Dover.
22nd May, 1925.

Dear Sir,—Without any doubt your paper "Eggs" is unique and in every way a road to make Poultry farming a success.

Yours faithfully,
(Signed) G. F. H. PRICE.

Galen House, Nightingale Road, Guildford.

Dear Mr. Newman,—I have six White Leghorn hens, and have profited by the advice given in "Eggs" to a very gratifying extent.

Yours truly,
(Signed) E. M. WAIND.

A Study of the Relative Values of certain Succulent Feeds and Alfalfa Meal as Sources of Vitamin "A" for Poultry.

By **D. E. DAVIS** and **J. R. BEACH.**
(University of California).

(Continued.)

DISCUSSION OF THE EXPERIMENT.

Group 5, the supplement for which was blue grass lawn clippings, was the only one to remain free from any indications of Vitamin "A" deficiency. The daily amount of lawn clippings supplied remained at one gram throughout.

The kale, green alfalfa, and carrots groups (Nos. 3, 4 and 7) were about equally affected, each having one bird showing a few pustules on the eighty-seventh or eighty-eighth days. Although the daily amount of these supplements was not increased above the initial one gram, no other birds became affected. Neither did the lesions on the three become more severe, nor was their general health impaired. The only discernible difference between the three groups was in the duration of the pustules of the one affected bird in each group. This was three days only for the carrots bird, and until the close of the experiment for the kale and green alfalfa birds.

The results in groups 1 and 2, fed field-grown barley and red clover, were very similar. One bird in each group exhibited pustules in the esophagus on the thirty-sixth day. Two days later one additional bird in the barley group had a few pustules which remained for two days only. The daily amount of the supplement was increased to two grams for a period of one week and then reduced to one gram. No further definite evidence of nutritional disease appeared in these groups. However, all of the birds appeared less thrifty than those in the four groups discussed above, and the mortality from other causes was greater than in any other group.

In the alfalfa meal group, three birds suffered from nutritional disease. After the daily feeding had been increased to eight grams, two of these birds improved and no more became affected.

The results with sprouted barley as a supplement were distinctly inferior to those obtained with any other form of green food. Five of the six birds developed pustules. It was necessary to increase the daily amount to sixteen grams (19.7 per cent. of the total ration) before the condition of the affected birds improved, and additional birds ceased to become affected. This amount is equivalent to but two grams of the green tops, since the weight of this part was found to be approximately 12.5 per cent. of that of the whole plant.

TABLE II.

TABULATED RESULTS OF THE EXPERIMENT.

Started January 14th—Terminated April 24th.

Pen No.	Group No.	Supplement.	Number of birds Jan. 14.	M'mum amount of supplement supplied daily.	Max. amount of supplement supplied daily.	No. of birds developed nutritional disease.	No. of birds recovered nutritional disease.	No. of birds died nutritional disease.	No. of birds died other causes
I.	1.	Green Barley	6	1 gm.	2 gm. (8)	2 (1)	2	0	2
	2.	Red Clover	6	1 gm.	2 gm. (8)	1 (2)	1	0	4
II.	3.	Kale... ...	6	1 gm.	1 gm.	1 (3)	0 (3)	0	0
	4.	Green Alfalfa	6	1 gm.	1 gm.	1 (3)	0 (3)	0	0
III.	5.	Blue Grass...	5	1 gm.	1 gm.	0	0	0	0
	6.	Sprouted Barley	6	1 gm.	16 gm.	5	2 (5)	0	1
IV.	7.	Carrots ...	5	1 gm.	1 gm.	1 (4)	1	0	0
	8.	Beets	6	1 gm.	32 gm.	6	1 (6)	5	0
V.	9.	Alfalfa Meal ...	6	1 gm.	8 gm.	3	1 (7)	0	0
	10.	None (Control)	6	0	0	6	0	6	0

(1) Observed on the thirty-sixth and thirty-eighth days and persisted fifteen and two days respectively.

(2) Observed on the thirty-sixth day and persisted six days.

(3) Observed on the eighty-seventh day and persisted until the close of the experiment.

(4) Observed on the eighty-eighth day and persisted three days.

(5) Lesions in two birds persisted until the close of the experiment. One bird, with lesions, killed by mates.

(6) One bird lost characteristic lesions, but was weak and unthrifty when experiment terminated.

(7) Lesions in two birds persisted until the close of the experiment.

(8) Two grams fed for one week only.

Pullets seven months old at close of experiment.

All of the six birds in the mangel beets group were severely affected with nutritional disease, and five died from this cause. The sixth bird appeared to be recovering when the experiment was terminated. The daily amount of beets was increased from one to thirty-two grams, but the birds suffering from Vitamin "A" deficiency were not benefited. Since three of the five deaths did not occur until twenty-six to thirty-eight days after the thirty-two gram daily feeding was started, the recovery of the one bird must be ascribed to natural resistance or to a tolerance for the ration deficient in Vitamin "A."

All birds in group 10, the control group, developed the characteristic lesions due to Vitamin "A" deficiency and died. This demonstrated that the basal ration was deficient in Vitamin "A."

The number of birds in each group and the variation in the results are both too small to make possible an exact comparison between blue grass, carrots, kale, green alfalfa, field-grown green barley, and red clover as sources of Vitamin "A" for poultry. The apparent differences between them, which the results indicate, might be found non-existent by further experiments.

The results do, however, clearly demonstrate that carrots are equal in value to any of the others with the possible exception of blue grass.

Blue grass might be considered superior to the others since this is the only group that remained free from definite evidence of Vitamin "A" deficiency. Carrots, kale, and green alfalfa might be slightly inferior to blue grass, because one bird in each group showed evidence of suffering from Vitamin "A" deficiency which appeared the eighty-seventh or eighty-eighth day of the experiment. The daily amount of these supplements given, however, was not increased above one gram. Field-grown green barley and red clover might be considered somewhat less effective than the preceding, because one bird in each group exhibited definite indications of suffering from Vitamin "A" deficiency on the thirty-sixth day, which is much earlier than in the carrots, kale, or green alfalfa groups. Furthermore, the birds were less thrifty in appearance, and the mortality from causes other than nutritional disease were greater than in the other groups, and the amount of these supplements was increased to two grams for a period of seven days. However, as previously pointed out, considering the small number of birds in each group, the variation in the results is not sufficient to warrant the conclusion that definite differences exist between these supplements as sources of Vitamin "A" for poultry.

Alfalfa meal was distinctly inferior to any of the above-mentioned supplements since it was necessary to increase this to eight grams daily. This is four times the maximum daily amount of any of the others.

It was necessary to increase the amount of sprouted barley from one to sixteen grams to prevent development of lesions resulting from Vitamin "A" deficiency. This was twice the maximum amount of alfalfa meal and eight times the maximum amount of blue grass, carrots, kale, green alfalfa, field-grown green barley or red clover. The weights of the sprouted barley represent the weights of the entire plant, although the green top is the only part of the plant from which any appreciable amount of Vitamin "A" is derived. This, however, was thought to be the best basis for determining its value, because it is in this form that sprouted barley is commonly used by poultrymen. Had we supplied only the green tops, the results would probably have been comparable to those obtained from some of the other forms of green food since the largest amount supplied contained only two grams of green top.

The results with mangel beets indicated that they were entirely ineffective, and, therefore, as a source of Vitamin "A" for poultry, valueless.

CONCLUSIONS.

In conclusion, the writers desire to point out that the amount of supplements fed represent the minimum requirements to prevent the occurrence of lesions characteristic of Vitamin "A" deficiency, and do not necessarily represent the actual requirements for good health and productivity. Furthermore, this experiment deals only with

(Continued at Foot of Column Next Page).

Notes on Utility Ducks.

By A. HAROLD PAINE.

The Editor has asked me for a few notes on "The Growing Duckling: How to Manage Her," and having successfully reared many thousands of youngsters on the methods which follow, and many thousands having been reared on similar methods in all parts of the United Kingdom, my readers are likely to meet with a fair measure of success by following my advice. So many youngsters are hatched out in June that I had better start right at the commencement, i.e., the day of hatching. As soon as the ducklings have dried off in the incubator, they should be put straight into the brooder, and very little heat should be given. Should the present hot spell continue, I would suggest the lamp being taken out of the brooder and a hot-water bottle put in its place, and this need only be used during the night. In removing the youngsters to their new quarters great care should be taken to see that they do not get a chill. The best way is to put them into an ordinary chick or duckling box, such as is used for the despatch of youngsters by rail, and transfer them as speedily as possible to their new quarters. The best litter is soft hay, which should be kept dry and changed very frequently, so that it is always clean. When brooding in the early season it is advisable to keep the brooder under shelter, but in the warm weather it may be quite out in the open. The best brooder is that of the double compartment type, the first compartment of which has an inner chamber in which the youngsters sleep. The first feed should be given when the ducklings are not less than thirty-six hours old, and not more than forty-eight, and it is advisable to give them a little drinking water immediately after their removal to the brooder The drinking trough should be at least three inches deep, and to prevent the youngsters drowning, several stones and pieces of bricks should be placed in it that they can get their bills in between these to a good depth, it being essential that the nostrils should always be kept clean. The first feed is bread, preferably brown, soaked in milk or milk and water. Add to this a little limestone grit, or fine sand, and see it is fed in a fairly crumbly condition, as if it is too moist the ducklings will get their heads covered with it. Feed the youngsters outside the brooder, and after about ten minutes, which is long enough for them to clear up all that is sufficient, remove what is left, as it is particularly dangerous to leave food in reach of them, especially if it is exposed to the sun. This feeding should be repeated about four times daily. Towards the end of the first week a little Sussex Ground Oats, or best Middlings, may be added to the soaked bread, thus preparing the youngsters for the following mash which one should start giving on the eighth day:—Three parts middlings, one part biscuit meal, one part Sussex Ground oats, quarter part fish or meat meal, all of the best quality. Continue with this mash, letting the youngsters eat as much as they will four times daily for ten minutes for a further three or four weeks, and during this time, in addition to the fine grit or shell being given in the mash, a separate small pan of same should be always available. Let the ducklings have plenty of shade, and see that the drinking water is always kept under cover. If the ducklings are reared under a hen, instead of in the brooder, exactly the same methods of feeding should be followed, and up to twenty-four youngsters may be put under a heavy breed bird. If she is a quiet, well-behaved bird, she will do everything that is necessary for them excepting the feeding and watering. She will "house" them carefully under her at night, and during the day she will take them for little walks if sufficient space is available, and teach them how and where to find a little natural food. After the first week, whether natural green food is available or not, they should have a little given them every day, either finely-chopped dandelion, chickweed, lettuce, or groundsel, or a combination of these. It is a good plan to mix with the mash once or twice weekly very finely-chopped spring onion, giving both the bulb and the green part. The ducklings may be removed from the hen, or the brooder, to their house at about seven or eight weeks old, or earlier or later, according to the weather and time of the year. I never met with a really good duck house until I designed my own, and this was illustrated in our 1923 Annual Register. The

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A Study of the Relative Values, etc.—Continued.

greens as a source of Vitamin "A", and gives no consideration to the value of green food in providing succulence, bulk, or minerals in the ration. Therefore, no recommendations as to the exact amount of greens that should be fed to poultry can be made. The following general suggestions, however, for the practical application of the results of this work can be made.

First.—All the varieties of field-grown greens used are good sources of Vitamin "A" for poultry. In making selections among them, the poultryman needs consider only their adaptability for culture in his locality.

Second.—Carrots appear to be equal in value to the field-grown greens, and therefore should make satisfactory substitutes for them.

Third.—If sprouted barley is used as the entire source of Vitamin "A" for poultry, the amount fed should be in excess of 20 per cent. of the total ration.

Fourth.—If alfalfa meal is used as the entire source of Vitamin "A" for poultry, the amount fed should be in excess of 10 per cent. of the total ration.

Fifth.—Mangel beets appear to be valueless as a source of Vitamin "A" for poultry.

Finally, the writers desire to call attention to the utilisation of cod liver oil as an emergency source of Vitamin 'A" when no greens can be obtained. The incorporation of at least 2 per cent. of this oil in the mash will, in all probability, prevent any loss due to Vitamin "A" deficiency. The use of yellow corn as the grain ration will also be effective for this purpose.

house is constructed of full three-quarter tongued and grooved boards, on 2 x 2 quartering; it is built in sections, and can, therefore, be easily taken down and re-erected. The floor is at least six inches off the ground, and is wired underneath to give protection against vermin. Some of the houses I first made were felted under the floor, but as that prevents any air passing through, I am not now using it. The roof is covered with heavy Bitumen felt and projects slightly all round. For very wet weather a simple adjustable shutter is attached. The door in centre is hinged at foot, and also forms the step, and, being of a good width, it obviates any danger to the birds when leaving or entering. This is a point which should be noted, as until the ducks are thoroughly accustomed to the person looking after them they may be very nervous, and at "closing" time, as they rush in, a broken limb may result. One of the great difficulties obtaining with the old type of duck house is that of collecting the eggs. Ducks generally lay in the darkest corner of the house, and that corner happens to be the least accessible, so in this house of my own design the sides of the front slide out entirely, and the eggs can be collected in as many seconds as it used to take minutes. Further, the whole house can be cleaned out and re-littered very quickly and very easily. An additional advantage is that the house can be left completely open all day long, so that the litter dries very quickly, and the house can never get foul. By a slight addition and adjustment this house can be used for rearing practically from hatching time, and the slides when out, by adjusting them to an inverted V shape, make an excellent shelter for the growing stock. Ample ventilation is provided the whole length of the top front of the house. I have probably already exceeded the space the Editor has placed at my disposal, so I will continue in my next article the treatment of the duckling from eight weeks onwards to maturity.

(To be Continued).

Crafnant, Chester Road, Neston, Cheshire.

Dear Sir,—As a beginner, I have only just heard of "Eggs," and take this opportunity of thanking you for the valuable information contained therein.

Yours truly,
(Signed) E. COPELAND.

Long Whatton, near Loughborough.

Dear Sir,—At the same time I would like to state my appreciation of "Eggs." In my opinion it is an infinitely better paper than any of the other poultry publication.

Yours faithfully,
(Signed) C. H. KEITH JOPP (Major).

Saltburn-by-Sea, Yorks.
11th November, 1924.

"Dear Sir,—I appreciate 'Eggs' tremendously—there is something good on every page, and it is really the **only** Poultry Paper worth reading. I have found the other papers a sheer waste of time."

Yours faithfully,
(Signed) (Miss) E. ARMSTRONG.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw. Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

L. (Knightsbridge) asks if there is a trap-nest invented which releases the hen automatically and resets the trap. Yes, I have seen two such nests, but the cost would appear to me to be prohibitive, and the space occupied far greater than can be afforded by the average poultry-keeper. I have never seen such a nest in operation on any practical poultry farm, although there have been a few at the various exhibitions.

"Starter" (Derry) says he bought ten dozen White Leghorn eggs. From these he hatched 90 chicks. He had 20 with black feathers, and one blue chicken, and now he has about 30 with "toppins" on their heads (my correspondent means a crest), and he wants me to tell him if these chickens of his can be pure bred and show these black feathers and "toppins," and would it be safe to breed from any of the remainder which show no oddness? He wrote to the lady from whom he purchased the eggs, but got no reply. It is perfectly certain that these birds with the crests, or "toppins" as my correspondent calls them, are not pure bred. Probably there has been some out-cross with the Houdan. Black feathers occasionally appear in White Leghorn stock, and are not necessarily a sign of impurity, but the crests would be a sign. As to his breeding from the rest, he would be well advised not to do so as he is a beginner, unless he can get some expert to come in and judge for him whether they are pure bred or not.

L. S. (Cudworth) asks what is the cause of liver disease, and what is the cure? I am afraid I cannot go into this very fully. There are many forms of liver disease, and they are not all induced by feeding, although the excessive feeding of carbohydrates and fats will cause it. Frequently, too, it may be due to chill, but there are so many things bundled together and described as "liver disease." Certainly wrong feeding may cause it, particularly in heavy breeds. Excess of animal food will do so. The symptoms usually are dark-coloured comb, mustard-coloured excreta, the bird is yellowish in the face, and generally in an over-fat condition. Change of feed is the best cure, plenty of fresh green food, and a mild dose of Epsom salts in the drinking water. Birds which have a decided tendency to this disease are usually not worth curing.

F. D. (Taunton) writes asking as to treatment of a chick, which she describes as being "blown up like a balloon." She sends samples of foods, to know whether we can trace the trouble to any of these. The foods are all right. The trouble is Emphysema of the skin. It is a condition in which there is an abnormal amount of air in the sub-containeous region. It may be due to a rupture of the organs containing air, such as the trachea, or the various air sacs and passages connecting between them. The air imprisoned beneath the skin so distended it that the bird looked rather like a balloon. Feeding has nothing to do with the trouble, and I have never found any treatment very effective. Such chicks are not worth keeping. You could puncture the skin, and this will temporarily relieve the condition, but it is scarcely worth the trouble, and it would be wiser to kill and bury the chick.

Sprouts (Bungay). Yes, you can economise by sprouting oats. There is no necessity to do so until the sprouts are green; that makes much extra labour owing to the necessity of chopping them up. Feed them as soon as they begin to germinate. The analysis has been given in "Eggs" two or three times. It is as follows:—Albuminoids, 1.12; Carbohydrates and Fibre, 29.55; Fats, 1.20; Ash, 1.62; Moisture, 70.00. The Vitamin C. is created anew when germination has taken place two or three days. We do not know what actually occurs during germination, which makes the sprouted oat so valuable. There are chemical changes, of course, the starch is turned into dextrin and sugar, and is much more digestible. (2) You are right, the intestines are double the normal size during production, but it is due to the stretching of the walls and not to the increase of intestinal material.

New Reader (Panteg) asks if I can give him any information as to the comparative consumption of food to produce 100 eggs of light and heavy breeds. I know of no tests which have been made in this country in this direction, but the following figures are taken from an experiment which was carried out at Storrs' Experimental Station:—Number of eggs per 100lbs. of food: Rocks (Barred), 158; R.I. Reds, 159; Wyandottes, 182; Leghorns, 195. In answer to his second question, the record of the cross-bred Leghorn Wyandottes is very moderate indeed. The best plan will be to get rid of them at the end of the season.

Crooked Breasts (Milverton) purchased some White Leghorn chicks from a "special" pen with a view to reserving the cockerels for next season's breeding; four of them have crooked breast bones, and the other is a poor specimen. He asks me what he is to do, and adds that his own stock reared under similar conditions are "sound as a bell." There can be only one answer to this. He must scrap the cockerels, and get some others. The tendency to soft bone is inherited, and for that reason he should not breed from such stock, which have probably been bred from heavy producers for generations, and this weakness is a sure sign of degeneration. There is no method of feeding which will make these birds "O.K." The suggestion that cod liver oil would help is no good at this stage. (2) In answer to his second question as to the cause of blood in the droppings, this is usually due to the feeding of excessive fibrous matter.

Bothered (Uppingham) has early March Wyandotte pullets, which for some reason, to use his own expression, have got "stuck." The appetite is poor; they mope about, but there are no other symptoms to cause attention, except slight diarrhoea in one or two cases. They are fed wet mash twice daily, consisting of:—Biscuit meal, ground oats, thirds and meat meal; every other day they are given boiled rice, dried off with thirds and five per cent. meat meal added. There is plenty of green food, and the grain feed is equal parts, wheat and maize. I cannot say the trouble is directly due to the feeding. There may be other causes, such as insect life, and my correspondent should examine the birds carefully for this; overcrowding, one of the commonest causes of chicks getting "stuck"; foul ground and lack of shelter during a hot spell. It would be wise to change the feeding. Replace the kibbled maize with good plump white oats; change to maize again when they begin to lay. Discontinue the boiled rice, you are feeding too much starch already. Give in its place good oats, which have been covered in cold water, and allowed to simmer on the fire until it is absorbed; then dry off with middlings and feed. As samples have not been sent, presumably "Bothered" is satisfied as to quality.

25, Woodland Road, Barry Dock, Glam.

Dear Sir,—I am only a backyarder, yet I may say I have learnt already quite a lot from its columns, and am bringing your paper before my fellow-members of the Barry Fur and Feather Society at our next meeting. With anticipatory thanks.

Yours faithfully,

(Signed) F. CURLE.

Boundary Poultry Farm, Intack, Blackburn.

Dear Sir,—I have been a reader of your valuable journal "Eggs," for a few months now, and I think it is the best Poultry Paper published.

Yours truly,

(Signed) J. BIRCH.

Some Fruit-Growing Notes

to help Poultry-Keepers.

By F. W. WHEELER, F.R.H.S.

MORE FRAGMENTS.—I concluded my last notes with a promise for more "fragments" and with a reference to mildew on Gooseberry bushes, so I will again pick up the subject of GOOSEBERRIES, as I should like to add a few remarks with respect to growing these as a side line.

Firstly, from experience, I find one or two things:—(1) That I should prefer to plant any spare ground with this fruit in preference to Red Currants, and, in fact, shall gradually replace all of these with Gooseberry Bushes. The gathering of this fruit for marketing is spread over a longer period than other small fruits, and they need not be gathered to a certain day, whereas, for instance, the Red Currants want to be picked at exactly the right time. So when the growing of this class of small fruit is selected by poultry-keepers as a side line, the matter of not being tied too fast to certain days for such work as fruit picking is a clearly evident convenience. Again, it is much easier to market in bags, etc., than the chips required for the softer and more perishable fruits.

(2) The second thing I find is that it is best to sell all the Gooseberries in the green stage for cooking purposes instead of attempting to wait and gather a large proportion in the ripe stage. To mention only one reason: the wild birds take too heavy toll of our best ripe fruit. For culinary requirement I much prefer the smooth varieties, and I find the green, white or yellow kinds are the best, because for the red sorts it is rather detrimental to their sale for cooking when they start to change their colour, which is only natural with the later picking.

The picking of Gooseberries is all the better if spread over a series of weeks, because, beginning about Whitsun, we obtain a good price for those sufficiently large enough for the earliest market, and then, by a succession of thinning out of the largest berries, we help those left to swell up and finally obtain a heavier crop in the total.

I am not writing of methods, etc., that apply on the large fruit farms, where numbers of pickers are taken on specially to gather in the crops, and where bushes are left until the majority of the fruit is sufficiently ripe to almost strip them, and, of course, my remarks on "small" fruit must not be misunderstood regarding my advocating a combined fruit and poultry business, for I still maintain that the planting of poultry runs with half-standard apple trees is the best proposition for that combination; but there are many keeping birds who like to grow a variety of all sorts of fruit, so I write these notes and "fragments" from time to time to interest more of your readers.

Before leaving Gooseberries I might add that the pruning of these bushes is not a difficult matter, and that the chief thing to bear in mind is (a) to thin out the crowded parts of the bushes; (b) with the drooping varieties to cut to top eyes to encourage an upward growth; (c) to cut away certain of the older parts of the bushes so as to gradually replace with new growths for obtaining a better quality of fruit.

There is, I think, room in to-day's notes for me to refer to an hitherto unmentioned "fragment"—namely, SUCKERS. Everyone growing fruit finds they are up against these annoying shoots which spring up from the ground near the base of apple, plum, and other trees; they come chiefly from broken and disturbed roots, and are not only useless (because coming from below the graft), but if allowed to grow draw much nourishment away from the trees, both as regards growth and cropping.

It is useless merely to cut them off level with the ground, the result will be increase in both numbers and strength. Often these suckers can be removed by pulling up, or I prefer to remove the soil and with a knife cut them away from where they start off from the root.

Raspberries will give numerous suckers, which should be pulled up before growing strong, unless you want to reserve a certain number of these canes for making new plantations in the winter. Do not confuse these with the new growths from the actual stools of each plant which are wanted for fruiting the following year, and to take the place of the canes you cut away soon after they have finished bearing fruit. With these new growths in the stool it is wise to thin out their numbers and to leave only five or seven of the strongest according to general conditions, and the method you have selected from growing them—i.e., in rows or clumps.

New shoots from the base of black currants, which are also suckers, are continually required for constantly renewing the bush with new wood so essential to Blacks, but with Red Currants, when grown as bushes (without a leg), it is only necessary to occasionally replace the trained and closely-pruned fruit-bearing stems by a new growth.

21, Arthurdon Road, Brockley, S.E.4.

Dear Sir,—You may be interested to know that I have forsaken all other poultry journals, and cleave only unto "Eggs." I share the just appreciation of your other correspondents.

Yours faithfully,
(Signed) R. E. HOOK.

Thaba 'Nohu, Naze Park, Walton-on-Naze, Essex.

Dear Sir,—I have recently been recommended your paper, "Eggs,' by a poultry farmer, and I must honestly say that there is no other poultry paper which is as good in any respect, and which gives such sound advice.

Yours faithfully,
(Signed) JOHN HERRINGTON.

Correspondence.

DISEASE.

To the Editor of "Eggs."

Dear Sir,—Every year during the chick-rearing eason the same difficulties seem to occur, and poulry-farmers all over the country suffer appalling asualties from outbreaks of disease, for which, in ome cases, there is no cure. Science is able to tell us he name of the disease from which the chicks happen o be suffering, and in the majority of cases, can tell us what to do to cure it. But in the minority of cases, specially B.W.D. and Coccidiosis, science can give us no remedy.

These two diseases are the most serious with which he poultry farmer has to contend, and if science is at present at a loss we must work towards prevention.

In these circumstances, I would like to advance a heory which I have ,in some measure, been able to est this season, and the conclusions arrived at convince me that the cause of an outbreak of B.W.B. or Coccidiosis is simply faulty brooder management, or, o put it more brutally, bad management.

My scientific knowledge is limited, but at the same ime, I think it is possible that an ultra-scientific view of the question tends to obscure the practical issues.

My theory is simply this. (And throughout I am eferring to a good average hatch, the chicks from which are obviously bright and healthy). Given *normal* condition of warmth in the brooder, having egard to the weather at the time, no disease is possible, so long as litter, house and appliances are horoughly clean, and that this applies, even if the parents of the chicks have been blood-tested for B.W.D. and are proved to be carriers. My reasons are as follows:—

Human blood is composed of red and white corpuscles, the white always containing a certain quanity of germs of various diseases and ailments harmful o the system if allowed to develop. In the red corpuscles are germs which, so long as health is mainained (i.e., so long as the blood is healthy) are strong nd active enough continually to make war on, and eep within harmless dimensions, the "white" germs. Once the standard of health is lowered, the quality of he blood suffers, and the germs in the white corpuscles re able to multiply for the reason that the "red" erms are not then strong enough to cope with them. Continue this low standard of health, and inevitably he "white" germs will affect the system. If a cold evelops it will be because the "cold" germs have been he strongest, and have, therefore, developed more uickly.

It will be seen, then, that human beings are, in fact, arriers of disease.

Now I do not think it unreasonable to suppose that he blood of poultry acts in much the same way. It ollows, then, that poultry generally are also carriers f disease, from the chick onwards. I do not think that they are necessarily carriers of all diseases, for there is always the question of infection to consider, to which I will refer later. It is also possible that the blood of poultry may contain more germs of one disease than of another.

A good hen will give to her chicks an even temperature, and chilling and over-heating are practically unknown. In the case of the foster mother, chilling and over-heating are obviously due to human errors. This is so important a fact to remember that I emphasise it. Consider the consequences.

Some chicks are, by nature, stronger than others, and if too low or too high a temperature be allowed to continue, the weakest chick will be the first to show signs of trouble. Any chick that shows the very slightest sign of anything that is not normal should, for the sake of the remaining chicks, be killed and burnt without hesitation. For just as a cold in a human being, if not looked after, may, and often does, lead to many worse things, so an ailing chick develops worst things than the original ailment. It is here that the risk of infection appears.

Suppose the first chick to suffer had more B.W.D. germs in its white corpuscles than any other germ, it is certain that unless that chick is killed, B.W.D. is likely to break out in the rest of the chicks. My point is that B.W.D., Coccidiosis, or any other similar outbreak is impossible where chicks are raised in a normal temperature. A cold may lead to simple diarrhoea, to pneumonia, and equally, therefore, to B.W.D.

A hatch badly over-heated or badly chilled always develops trouble, and, if this becomes serious, it is much cheaper to destroy the lot.

It is a recognised fact that the earlier the hatch, the more easily will it be reared, and I think the only logical explanation is that it is almost impossible to provide too much heat in a normal January, February or March; but in the later months, where there is usually a much greater variation in the outside temperature, it requires more skill to give the correct warmth.

I have been assured by one of the leading experts in the country that there are few farms which would be found to be free from carriers of B.W.D. if their stock were blood-tested. I accept this statement, and do not consider it in the least alarming, for the reasons given above.

I am convinced that carriers have no ill-effect on their progeny, and that successful rearing, in its early stages, depends entirely on good brooder management. No expert has yet satisfied me that he has sufficient grounds for the allegation that B.W.D. is necessarily transmitted in such a way as to make it certain that chicks bred from carriers will inevitably suffer from the disease.

If this were the case, then it seems to me that poultry farming would be on a par with pure gambles, but with few, if any, chances in favour of the gambler, and, as a business, doomed to failure.

All of us have had to thank science personally at some time or another in our poultry experience, and we have now an opportunity to assist its investigators.

I would, therefore, urge poultry-farmers to reconsider this question fundamentally, for if, as I believe, the management is at fault, the outlook, which before was a slough of despond, is hopeful indeed.

If my theory be correct, it is quite unnecessary, in the present state of knowledge, to go to the expense and trouble of having stock blood-tested. Take the case of a bird which reacts only at the second test, and not at the first. Is it not reasonable to suppose that at the first test the bird was in perfect condition, but at the second test, a slight and temporary subnormality had allowed a sufficient number of B.W.D. germs to develop to make agglutination possible?

After all, the life of the human being (civilised that is) is largely artificial, and he is seldom for long in an absolutely perfect state of health, and birds artificially kept must be in the same category.

Yours faithfully,
H. G. PINKNEY.

ROUP.

To the Editor of "Eggs."

Dear Sir,—As one who has had some experience with roup, I beg to give my experience. It may, or it may not be of help to others. I put it like that, because the method I used was rather crude, but effective.

A few years ago I had a house of 600 year-old White Leghorns, running together. They suddenly contracted roup. I found two or three dead on the dropping boards, and a number of others gasping.

The first thing I did was to kill about 30 of the worst cases, and burn them. I then cleaned out and burnt all litter, and sprayed paraffin freely everywhere. I starved the birds for 24 hours, keeping them without water also.

First drink, water with Izal added, one teaspoonful to every three gallons—this for a week.

Feed wheat steeped in Izal water, one teaspoonful to one gallon of water, giving a little wheat *not* treated with Izal first, then the treated wheat every two hours. No mash for three days.

I then, after three days, swept up all droppings, burnt them, sprayed out again, and littered down with fresh wheat straw, dusting Izal *powder* therein. I kept the birds in for three weeks, giving 12lbs. of grain daily in six feeds, leaving half for a feed one hour before sunset. Mash hoppers open from 2 p.m. till dark. I gave them kale at 9 a.m. and 5 p.m. as much as they could eat, which was enormous. I have not had roup since.

My experience teaches me that roup is from the following cause, but I may be mistaken. However, I am acting accordingly:—Bird catches a cold, mucus catches up dust, blocking nostrils, cool air cannot keep brain and eye muscles active because it is passing in through the mouth. Eyes become swollen and mucus frothy because it cannot pass away, only down to the corner of the mouth, where it eventually becomes congealed, later being forced out somewhere; the roof of mouth takes up deposits, coughing inflames the windpipe, more deposits, exhaustion, death. I put colds down to be caused by dust, indirect by "nostrils blocked up," dry air through mouth instead of nostrils, in addition to draughts and damp; also *too* much litter prevents good exercise, in that it becomes a burden.

I normally feed as follows:—Last year's pullets: Mash all days, grain, one hour before sunset, full ration, that is to say about 10-12lbs. per 100 birds per day. By this method they have a real fill up to go to bed with, and a scratch in the early morning.

The pullets were March and April hatched, 1924. Only a few went into moult, but I lost about 10 per cent. with prolapsus before I could steady them up. I have averaged about 65 per cent. of eggs since last October. But there are signs of an early moult.

Yours faithfully, C A. K.

THE PRICE OF EGGS,

To the Editor of "Eggs."

Dear Sir,—So much mud is always thrown at the local dealer, or "higgler," and one often is called a fool, or a philanthropic ass, if one deals with him, that, I think, a word of praise is occasionally due. Perhaps praise is rather a strong word, but, anyway, a protest against the invariable mud this gentleman receives.

I have found over a number of years that in a remote part of the country, such as this, that his prices compare favourably with London prices, although "Why don't you send to London?" is the ignorant question one hears so much.

My chief quarrel with the dealer is that he will not pay for graded eggs—he prefers one price for all—dirty, small, large, or cracked—therefore, my graded eggs go where they are appreciated—in my case to the employer of a big London drapery store. But the reason for this letter was to give you some recent figures with regard to a consignment of three-year-old hens. Giving a firm, which largely advertises itself as "Live Poultry Salesmen" a trial (I had dealt with them before) I ascertained prices, sent for crates, and despatched 50 good-sized Wyandottes, averaging 4lbs. bare. I was only paid 8d. and 10d. per lb. Their cheque was £6 8s. 5d., and from this 21s. 6d. carriage and 5s. postage this end has to be deducted, making a return of £5 1s. 11d.

If I had sold these hens at the door, no trouble, no packing, I should have avoided the 10 per cent. reduction for wastage, and at 7d. per lb., which was the current rate, they would have fetched £5 14s. 4d.

Both are miserable returns, true, but the greater of two evils—price evils is my choice every time.

Yours faithfully,
P. CLAPHAM.

BOARD OF AGRICULTURE FOR SCOTLAND.

EGG-LAYING TEST, 1924-25.

Egg Production of Leading Pens at end of Eighth Period—26th May. 1925.

Figures are Eggs and Points respectively up to April 28, 1925;

Section 1. White Leghorns.—J. Prentice, Uddingston, 903, 960; D. Baxter. 114, N. Vennell, Lanark, 859, 857; J. W. Dobbie, Rothesay, 900. 798.

Section 2. White Wyandottes.—R. A. Oliver, Boarhills, Fife, 814, 780; S. E. S. Burnett, Colliston, Arbroath, 708, 680.

Section 3. Rhode Island Reds.—Mrs. Logan, Kirkland, West Kilbride, 876, 874; H. P. Roche, Stevenston, 823, 821.

Section 4. Non-Sitters other than White Leghorns.—R. Scott Miller, Clydeneuk, Uddingston, 771, 771; Jackson and Johnstone, Linthaugh, Stonehouse, 731, 729.

Section 5. Sitters other than in Classes 2 and 3.—J. Adams, Celland, Lanarkshire, 773, 772; Mrs. J. Craik, Borlandhills, Dunlop, 676, 676.

Section 6. Ducks.—H. S. Godsmark, Sellindge, Ashford, Kent, 963, 918; R. A. and A. M. Johnson, Chalford, Stroud, 732, 731.

ANSWERS TO QUERIES.—Continued.

J. T. (Brisbane) asks for a good dry mash for R.I. Reds. He does not say when they were hatched. Presumably they are growing pullets? At present he is feeding them on one for which he has to pay 18s. cwt. Rather too big a price in these times. If for laying stock I would advise him to use the following :—2 lbs. bran, 4 middlings, 2 maize meal, and one meat and bone meal. This should be always before the birds. For growing pullets :—3 lbs. bran, 4 middlings, 1½ Sussex ground oats, half maize meal, half meat and bone meal. For the growing stock, the best grain would be three parts good plump white oats, one wheat, and one kibbled maize. For the layers, equal parts wheat and kibbled maize. He asks what amount of grain he should feed. Approximately I would say two ounces, but he must be governed by the condition of the birds, and the best plan always with grain feeding is to give them as much as they will eat in about ten minutes or quarter of an hour. The mash is suitable for the winter.

M. F. (Boxmoor) wishes to know what is wrong with her pullets. They were thriving until about March 17th, when she noticed their legs seemed to grow too long for their body ; some are knock-kneed, and rub their legs together when they walk. They rest a great deal on their hocks. They are a small flock, with good roomy house and good run. She feeds the following mash :—4 lbs. middlings, 4 bran, one S.G.O., one fish meal, and one maize meal, fed dry, always before the birds. She also wants to know if it does chickens any harm to be in a roomy house until 7.30 in the morning, and if it will put the pullets off laying if they were not moved to winter quarters until the middle of September. Her chicken houses are full of feathers, and she wants to know how often they change their plumage before actually assuming the adult feathering. I should think these pullets are suffering from over-stimulation. My correspondent would do well to replace one half of the maize meal with another half S.G.O., and reduce the fish meal to half pound. It would be a good plan to give these pullets one teaspoonful of cod liver oil to every pound of mash. It will not harm them to stay in the house until 7.30 in the morning. It would be advisable to move the pullets at the beginning of September. A change later would be likely to put them off lay for a fortnight or so. The feathers in the house are due to the chickens dropping their chicken plumage and assuming the adult. Of the samples sent, the middlings at 10s. 6d. are very good. The bran also is quite fair value at the money. The S.G.O. are a good sample, but at 18s. cwt. a trifle dear. The fish meal at 22s. 6d. is good. The maize meal is only a moderate sample, and at 15s. cwt. is dear.

POST-MORTEMS.

H. J. N. The post-mortem examination of the three chickens showed that the cause in two of them was impaction of the gizzard and duodenum with a tangled mass of long grass forming a "hay rope," as I venture to call it. The other bird was an unmistakable case of coccidiosis. This disease is infectious, and can be carried from infected pens or houses on the feet, or on the wheels of vehicles, etc., but the most usual medium of infection is the soil, food or water, contaminated by the droppings of diseased birds. Clean up the litter, and disinfect the floors of the houses every other day, and disinfect the runs before placing fresh birds in them by watering with a 3 per cent solution of commercial sulphuric acid. If too large to permit of this, fresh stock should be safeguarded by dressing the ground heavily with lime and digging in or ploughing. To treat, dissolve a third of a teaspoonful of powdered catechu in each gallon of the drinking water for a month. To avoid losses from "hay rope disease," the birds should not be allowed on the grass before it is cut or fed down.

A. G.. The post-mortem examination of the W.L. pullet showed the cause to be roup. Upon opening up the facial sinus it was found to be full of the characteristic cheesey deposit, and the roupy odour very pronounced. I should advise giving them the copper sulphate treatment, one dram dissolved in each gallon of the drinking water, and dipping their heads under a similar solution once every day. They should be held so that the mouth is open, and kept under for twenty seconds, the idea being to allow the disinfectant to penetrate the head sinuses through the slit in the hard palate. The birds should, of course, be strictly isolated, and not allowed to mix with others until at least a month has elapsed from the last recovered case. Disinfection of the houses is most important to prevent spread and also re-infection, and they should be done at close intervals, using strong fluid disinfectants. The usual procedure of scattering a little disinfectant powder about is worse than useless, as it only gives a sense of false security, and is quite ineffectual.

G. S. S. The trouble in the case of the duckling was infectious cerebro-spinal meningitis, the causative agent of which is unknown. How infection takes place is also undetermined, whether from bird to bird or from a common source, such as contaminated food, etc. There is no effectual treatment, but very good results have been given on the use of sodium hypo-sulphite as a preventive. This is given dissolved in the water that the mash is mixed with, the dose for birds of this size being ten grains per head, twice daily. I have on three occasions isolated in pure culture the same germ from the brains of affected subjects, and have inoculated another tube to-day from a case only dead thirty minutes. It is too early yet to say whether this germ is responsible or not, as much research has yet to be done before it can be definitely incriminated.

B. H. A. In reference to your query re testing soil, I think it would be safer to regard this run as infected, and to treat it as such. I could, of course, make an analysis of the soil, but it might just so happen that the samples might be free of the organisms, and the result misleading. A thorough watering with 5 per cent. solution of commercial sulphuric acid, although it would destroy the grass, etc., and leaving vacant for 15 days, would render it safe to use. The dose recommended for the treatment and prevention of roup is one dram of copper sulphate to a gallon of drinking water; it is best dissolved in a little boiling water, and then added to the amount to be used in the correct proportions. It is better to avoid roup by isolating **all** newcomers for three weeks, treating any birds that have been away from home in like manner, and to consider all incoming equipment as infected until disinfected.

M. W. S. The post-mortem examination of the turkey chick showed no signs of poisoning, neither could the microscope detect any form of parasites in the intestinal content. The lungs, however, were solid with pneumonia of the type usually associated with chill or overcrowding in a vitiated atmosphere. It might be as well to fortify these chicks with citrate of iron and quinine, forty grains in each gallon of the drinking water, and by adding 2 per cent. cod liver oil to their mash.

E. M. K. The trouble with the La Bresse chickens was a heavy infestation by the Heterakis Papillosa, a small round worm, whose presence in the intestines causes severe digestive disturbances —anaemia and toxaemia. Although the Light Sussex in the same pen are apparently unaffected, I should advise treating them all for worms, and an effectual remedy is tobacco. Tobacco stems, or waste tobacco, are chopped fine and steeped in enough water to cover for two hours; the whole is then mixed in a mash, and given to the birds after a period of fasting. A pound of tobacco is sufficient for 100 birds, and the treatment should be repeated after the interval of a week. The droppings, etc., should be collected and burned to destroy both the parasites and their eggs, and the runs dressed with lime, or watered with a 3 per cent. solution of commercial sulphuric acid.

Menadews, St. Clements, Truro.

Dear Sir,—" Eggs " is packed full of information from cover to cover, and contains more practical information than any two contemporary journals.

Thanking you, yours faithfully,

(Signed) L. CHOAK.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

LANCASHIRE BRANCH.

The Quarterly Meeting of the above was held in the Master Builders' Rooms, Mount Street, Preston, on Saturday, 20th June, 1925.

Present :—Mr. J. Wrennal (President), Mr. S. Marson (Chairman), in the chair; Messrs. J. Whalley, J. Moon, T. Edmundson, E. Evans, W. Fletcher, J. Dawson, W. Kay, A. Grime, F. Ashworth, D. Walsh, A. Hallows, G. Woodward, T. Sutton, W. Speakman, D. Braithwaite, J. W. Pearson, H. Winstanley, A. Sharples, J. I. Pate, G. E. Leigh, H. Hayes, G. B. Tootall, J. Ashworth, E. Collier, Rev. A. J. King, and Dr. J. E. Helm.

Apologies for non-attendance were received from Mr. W. Grove (Auditor), Mr. J. P. Willacy (Treasurer), and Mr. A. T. Walker.

MINUTES.—The minutes of the last meeting were read, and, on the proposition of Mr. A. Grimes, seconded bv Mr. Kay, were confirmed and signed.

CORRESPONDENCE.—The Secretary read a letter from the Ministry of Agriculture in regard to the complete return in Lancashire of the Poultry Census.

Dr. J. E. Helm then proposed a resolution be sent to the National Poultry Council, asking that body to press the Ministry to go into the system of obtaining the Poultry Census, so that a more efficient return could be obtained. This was seconded by Mr. T. Edmundson.

NATIONAL POULTRY PARLIAMENT.—The following resolution had been sent to the N.P.C. for consideration at the Harrogate meeting, on the proposition of Mr. G. B. Tootall, seconded by Mr. W. Fletcher :—

> "That the National Poultry Council be instructed to secure the co-operation of the Agricultural Colleges in obtaining independent and authorised records as to Economics of Commercial Poultry Farms, as already published for East Anglia and Yorkshire in respect to general farms showing : (1) Capital; (2) Costs of Production of Eggs and Poultry; and (3) Profits, on a group of selected poultry and general farms in different areas."

It was resolved that the nominations made by the Federation Council for delegates to the N.P.C. for 1925-6 be approved, on the proposition of the Rev. A. J. King, seconded by Mr. J. Ashworth, viz.:—Messrs. W. Hamnett, A. T. Walker, E. Collier, and Dr .J. E. Helm. It was resolved that Messrs. W. Grove and J. Whalley be delegates to the N.P.P. Meeting, together with the Council delegates, on the proposition of Mr. E. Evans, seconded by Mr. A. Hallows.

PANEL JUDGES.—The following persons have been nominated by their societies :—Mr. Walter Foster, Brookvale P.F., Rhodes, Middleton (Bury Soc.); Mr. H. Longworth, 8, Lower Clowes, Rawtenstall (Rawtenstall Soc.); Mr. H. Roscoe, Paddington House Farm, St. Michaels (Poulton Soc.). On the proposition of Mr. H. Hayes, seconded by Mr. J. Whalley, they were accepted.

SUB-COMMITTEES' REPORT—Educational and Propaganda.—In the absence of Mr. Grove, Mr. J. Whalley reported on behalf of this Committee. A letter was read from Mr. Grove, stating a special meeting had been held to review and add to the Exhibition Utility Standard. After consideration it was decided to have a new edition printed, and sent to each society, the price to be 3d. each to members and 6d. to non-members. This new edition deals with thirteen breeds.

LAYING TESTS.—Mr. H. Hayes reported on behalf of this Committee. The new suggestions for the next test, 1925-6, were Ribbons for Best bird and best pen; each month single birds to compete with pen birds for ribbons. First-class certificates for birds laying 240 eggs or over, and second-class for birds laying 200 to 240. A silver challenge cup will be awarded for the Society who obtains the best average per bird (in points), who has not less than 20 birds competing by its members, and providing not less than six Societies compete. It was also decided to allow a refund to Societies who run their local test with the Federation Test, of 33⅓ per cent. of the entry fees received from their members to enable them to purchase their Society prizes.

FINANCE.—The Secretary stated the Draw Tickets have been sent to each Society, and it is hoped an effort will be made to make the draw a success.

SHOW.—Mr. S. Marson reported on the progress of the Show. He stated they had obtained a suitable room (Territorial Riding School), Bromwich St., Bolton (about ten minutes from the station).

RIBBONS FOR SOCIETIES' SHOWS.—Mr. G. E. Leigh suggested the Federation might award ribbons to affiliated societies, who applied for them, to be given to the owner of best bird in their local show, and this was seconded by Mr. J. Wrennal and carried.

This closed the business, and the meeting terminated. E. COLLIER, Organising Secretary.

EGG WEEK DISPLAY AT WEMBLEY—JULY 15--JULY 21.

Organised by The British Poultry and Rabbit Industry Exhibits.

The Committee wish to educate the public taste as to the superiority of the New-Laid British Egg, and to promote the campaign of "Eat More Eggs," in which all producers are interested.

Prizes and Awards according to the number of entries. Entry Fee, 1s. Eggs to become the property of the Committee, and to be sold to promote the campaign.

Open to All:—Class 1: Brown Eggs. Class 2: Tinted Eggs. Class 3: White Eggs. Class 4: Duck Eggs. Class 5: Bantam Eggs.

Open to owners of 50 fowls or less:—Class 6: Brown Eggs. Class 7: Tinted Eggs. Class 8: White Eggs.

Class 9: For a dozen eggs, suitable for sitting purposes, the box packing and eggs to be taken into consideration.

Six eggs to be shown in Classes 1 to 8.

All eggs must arrive at Wembley on the morning of July 15th, and entries made to the Hon. Secretary, British Poultry Display, 3, Vincent Square, Westminster, S.W.1, not later than July 9th.

A Belated Reply to Criticism and some Further Views on Commercial Egg Farming.

By LESTER SPURGEON.

In a January issue of "Eggs" I ventured to express an opinion as to what I considered the simplest method of making a living from hens, and as a result my views were criticised by one or two correspondents, and our Editor had a good deal to say in the Editorial a few weeks following. Extra to this I had letters from various parts of the country asking my advice, and for opinion and criticism upon the suggested alteration of existing plants. I would like to take this opportunity of saying that it was quite impossible for me to reply to many, or to enter into the details of individual farms, and that chiefly because one could not reply briefly to many of the letters, as it meant discussing various points which I had neither time or inclination so to do.

It was at that time my intention of answering these enquiries in a general way through the columns of our paper, "Eggs," thus giving those interested the chance of getting my views for what they might be worth. However, for various reasons I did not do this, and I am now somewhat reluctant in becoming involved in these discussions.

No, it is not that I do not like my views being criticised, but rather that I am not always inclined to take up the pen in continued argument which does not get us much more forward, and further, it's not my job; mine is the more practical, whilst the writers are mostly inclined to theory. Theorists would better understand the practical man's point of view if they had to actually carry out the work on a farm over a number of years and not just a few months, or as opportunity occurred. I am almost inclined to the views of an old man we had working for many years, who expressed himself thus: "Yah, I never takes notice of anythink that's writ about vowls—if they've time to writ they've no time to work."

I would just like to mention what was in my mind when that little article was penned. There are dotted about the country quite a sprinkling of egg farms that have been installed by men, who, perhaps, wishing to supplement an income, have taken up this branch of agriculture, and by others who after the war could not settle down to town life, risked some out-of-door occupation as a means of living; and both types having other business experience. Quite a few of these people have come my way, and from time to time we have exchanged views upon this absorbing question of egg farming, and I think if there is one point upon which we all agree—it is the necessity of simplifying the work in every possible direction, and many would welcome the opportunity of starting afresh with the experience they have gained upon their present farms.

To have that enthusiasm for work all day, and every day, is all very well for a time and during the period we are getting our experience, but with men who are perhaps past the bloom of youth, and with other interests and experiences, this everlasting jog-trot does become wearisome to say the least. Commercial poultry and egg farming does mean that someone has to be at it all day, and to find labour to do what the owner would undertake is asking more than the present-day labourer is prepared to give, even though he could be found with sufficient experience and ability.

Those who carry on the work know full well what I mean, and many will ask themselves whether it is not better to attempt something clear and straightforward, as well as they know how, rather than become entangled with all the many side tracks there are to the hen business. I speak from the point of the "Owner-driver," and not he with theories, or he who sits at the helm of a business which does permit or has permitted control from an office chair.

HATCHING PERIOD.

I will reply briefly to our Editor's remarks as to my suggestion of restricting the hatching to the months of March and April. The period I mentioned is to a certain extent arbitrary, and were I out for commercial egg production mainly then I would not begin incubating until there was a plentiful supply of eggs which would permit me taking full advantage of the mammoth incubator one would certainly have on such a farm.

I agree the January-hatched pullet is a splendid bird, and she may lend herself for breeding purposes, but how many eggs can one get in December and early January in order to produce this creature? Those of us with experience in winter egg production know full well that the number is comparatively small from the breeding stock, and I question if it is worth while running a large machine for so few eggs as would be obtainable in those months. We have always started incubating so as to get the first batch of chicks out towards the end of February, and those early hatched pullets do most certainly help to fill the egg basket in the summer and autumn, but I have yet to convince myself that they pay to produce. Of this I am certain that they cost a good deal more than the later birds, and it takes more eggs to produce a pullet in the very early months than later, and the cost of running the mammoth incubator and brooder is no small item.

If you are willing to use your early (January) pullet as a breeder, you must not lose sight of the fact that a good percentage of them will be in moult just when you need the eggs, so that in any case only a very restricted number of birds can be produced in that month. But, of course, to find out whether it pays to start so early for commercial egg production one must know the costings, and, alas! costings is one of the weakest spots of our industry.

As to the March hatching of Leghorns, and this is the breed in question, one cannot make a definite statement in regard to time within a few weeks that these birds can be profitably hatched since both weather and environmental conditions have a good deal to say in the matter. I am of the opinion that we on our exposed hill at Woldingham ought to be from two to four weeks in advance of those in more favourable and sheltered positions, for when we have not the cold winds and mist to contend with there is the heat on an unsheltered hill-top.

(To be Continued.)

THE NATIONAL UTILITY POULTRY SOCIETY'S NATIONAL EGG-LAYING TEST.

REPORT FOR THE EIGHTH MONTH—16th May to 12th June, '25

Mainly owing to the very hot weather experienced throughout the greater part of the eighth period of four weeks and to excessive broodiness in a large proportion of pens amongst the sitting breeds, a heavy fall in egg production is to be recorded for that period. The total number of eggs laid was 34,565, or 16.75 eggs per bird, as compared with 39,819 and 19.21 for the previous month. The broodies numbered 635, of these 551 (12 twice) were among the heavy breeds and 84 of the light. Of the different breeds, the Sussex showed the greatest broodiness, followed by the Rhode Island Reds.

The great heat has also resulted in a good deal of moulting, especially amongst the White Wyandottes, and, as was to be expected, the birds that have been broody were the greatest sufferers.

The highest daily collection of eggs was 1,343 on the 4th day, and the lowest 1,151 on the 27th day of the month.

The health of the flock remains good, and the case of Avian Diphtheria referred to last month has yielded to treatment, and there has been no further case.

EGG PRODUCTION OF LEADING PENS.

Figures are eggs and points to date respectively:—

Section 1.—Championship (10 pullets).—G. B. Metcalfe, Lechlade, Glos. (R.I.R.), 1520, 1516; Frank Snowden, Cowling, Keighley (W.L.), 1419, 1418; Miss Nellie Bell, Ightham, Kent (W.L.), 1390, 1373; Leslie Williams, Liss, Hants (W.W.), 1370, 1368; Richard Rodwell, Nelson, Lancs. (W.L.), 1314, 1313; R. A. & A. M. Johnson, Chalford, Glos. (W.L.), 1294, 1294.

Section 2.—White Leghorns (5 pullets).—Mrs. E. A. Pallant, Wherstead, Ipswich, 738, 738; Fred W. Weeks, South Woodham, Essex, 767, 725; Easton Poultry Farm, Norwich, 720, 720; Mrs. E. M. L. Knight, Salisbury, 753, 718; B. Franklyn, Rossal, Shrewsbury, 717, 717; Balsham Manor Farm, Linton, Cambridge, 715, 714.

Section 3.—Black Leghorns (5 pullets).—Mrs. Mignon E. Clay, Long Preston, Yorks, 692, 692; E. Watkins, Cross-in-Hand, Sussex, 692, 692; The Misses Allday and Rawson, Peterboro', 686, 684; C. L. & J. A. Thompson, Maesgwyn, Penypylle, North Wales, 664, 663; Roland Garrett, Wheathampstead, Herts, 652, 652; Biggin Poultry Farm, Ramsey, Hunts, 647, 647.

Section 4.—Any Other Light Breed (5 pullets).—P. K. Berry, Market Harboro' (An.), 701, 699; Molassine Co., Ltd., Twyford, Berks (Br. L), 642, 642; J. H. Thompson, Alton, Hants (An.), 619, 619; J. R. Joy & Co., Rotherfield, Sussex (Ex. L.), 613, 600; J. E. Hughes, Ware, Herts (An.), 597, 596; Robert West, Thornton-le-Fylde (An.), 585, 584.

Section 5.—White Wyandottes (5 pullets).—A. K. S. Alexander, Norwich, 797, 779; G. Keith Simmons, Honiton, Devon, 793, 779; W. & T. Salt, Leicester, 730, 730; J. T. Finn, Marple, Cheshire, 724, 724; Chisbury Poultry Farm, Godalming, Surrey, 714, 714; Miss Hastings Irwin, Colchester, Essex, 715, 714.

Section 6.—Rhode Island Reds (5 pullets).—H. John Berry, Ottery St. Mary, Devon, 776, 775; J. B. V. & W. Cummings, Carlops by Penicuik, Scotland, 723, 723; Arthur Gawthropp, Northampton, 763, 721; Lady Dorothy Fraser, Leicester, 734, 710; John Beamish, Dolgelly, N. Wales, 698, 698; Marchioness of Graham, Isle of Arran, Scotland, 691, 688.

Section 7.—Sussex (5 pullets).—Mrs. E. M. Knight, Salisbury, 693, 693; T. Brooksbank, Hedon, E. Yorks, 684, 677; F. Rossal-Sandford, Shrewsbury, 666, 666; Mrs. M. G. Alston, Buntingford, Herts, 644, 643; H. S. Godsmark, Ashford, Kent, 633, 633; Mrs. M. B. Cowley, Abingdon, Beds., 629, 629.

Section 8.—Any Other Heavy Breed (5 pullets).—A. M. Kemp-Gee, Chesham, Bucks. (Buff Rk.), 660, 660; A .A. Plimpton, Beverley, Yorks (Buff Rk.), 653, 653; Marchioness of Graham, Isle of Arran, Scotland (W.L.), 636, 636; Miss Harrison Bell, Welwyn, Herts (Buff Rk.), 700, 634; Clarence A. Shuttleworth, Lothersdale, Keighley (Buff Orp.), 631, 630; Mrs. M. Crooks, Upper Deal, Kent (Buff Rk.), 621, 621.

The Laying Test is open to visitors on Tuesdays and Saturdays, between the hours of 2.0 and 4.0 p.m., and at other times by special appointment with Mr. J. N. Leigh, Dodnash Priory Farm, Bentley, near Ipswich.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, JULY 3rd, 1925.

GRAIN AND FEEDING STUFFS.—Very quiet conditions rule the trade for English wheat and rather lower rates are ioted, the average price of 12s. per cwt. being 4d. below last ek's figure. Reduced rates are also generally quoted for imrted wheats, owing to the dull market. Barleys are firmly ld at recent quotations at all centres except Liverpool, though the demand is quiet. Limited offerings of home-grown ts move slowly, as a rule, although better prices are realised Liverpool in consequence of the reduced quantities on offer. reign oats also are not in much demand, and last week's prices e barely held. The limited inquiry for maize continues, and view of the arrivals of new crop from Argentina prices nerally have further declined.

Offals are in quiet but steady request, and with rather more quiry for sharps at Hull these have been advanced by 5s. per n. Meals sell slowly, and both maize meal and white South rican are reduced at some centres, but otherwise quotations e firm. Little improvement is reported in the inquiry for oil kes.

MILLERS' OFFALS.—Bran (British): Bristol, £7 17s; Hull, 2s; Liverpool, £6 15s; London, £6 10s. Broad Bran: Bristol, 17s; Hull, £7 2s; London, £8. Middlings—Fine (Imported): ndon, £9 2s; Coarse (British): Bristol, £9; Hull, £8; Liverpool, ; London, £7 10s. Pollards (Imported): Bristol, £7 17s; Hull, ; Liverpool, £7; London, £7 5s. Rice Bran: Bristol, £7 17s; verpool, £7 5s; London, £7 15s. MEAL.—Barley Meal: Bristol, 1 15s; Hull, £11 13s; London, £12. Maize Meal: Bristol, £12 12s; ull, £10 16s; Liverpool, £10 15s; London, £11 10s. Maize Meal African): Bristol, £10 10s; Hull, £9 5s; Liverpool, £9 5s; ndon, £8 15s. Maize Germ Meal: Bristol, £10 15s; Hull, £9 10s; ndon, £9 10s. Maize Gluten Feed: Bristol, £11; London, £10. cust Bean Meal: Bristol, £9 15s; Hull, £9 15s; Liverpool, £9 10s; ndon, £9 15s. Bean Meal: Bristol, £13 15s; Hull, £11 18s; ndon, £13. Fish Meal: Bristol, £20 10s; Hull, £19; Liverpool, 8 10s; London, £19 10s.

EGGS AND DEAD POULTRY.

Supplies of eggs are rather short, especially English, which alise higher values, foreign descriptions being very firm in ice.

Week-end Prices—Eggs (per 120): British, 15s 3d, 12s 9d; Irish, 9d, 13s 6d; Danish, 16s 6d, 16s 0d; Dutch, 16s 3d, 15s 3d; French, 3d, 14s 0d; Russian, 11s 0d, 9s 6d; Lithuanian, 12s 3d, 10s 9d.

Dead Poultry (per lb.): Fowls—Surrey, 2s 0d, 1s 6d; Irish, 6d, 1s 2d. Others, 1s 9d, 1s 4d. Ducks, 1s 5d, 1s 2d.

EGGS..

Per Doz.—Ashford: First, 1s 11d; Second, 1s 9d. Birmingham: st, 1s 6½d; Second, 1s 5½d. Bridgwater: First, 1s 10d; Second, 9d. Chelmsford: First, 1s 8½d; Second, 1s 6½d. Colchester: First, 9½d; Second, 1s 7¼d. Doncaster: First, 1s 8d; Second, 1s 6d. rchester: First, 1s 10¼d; Second, 1s 9d. Exeter: First, 1s 6d. reford: First, 1s 5d. King's Lynn: First, 1s 6d; Second, 1s 5d. andilo: First, 1s 3d. Mold: First, 1s 6d; Second, 1s 5d. Newport on.): First, 1s 6d; Second, 1s 5d. Norwich: First, 1s 9½d; Second, 7¾d. Oswestry: First, 1s 6d. Penzance: First, 1s 3d; Second, 2d. Saffron Walden: First, 1s 10¾d; Second, 1s 7¼d. St. Ives unts): First, 1s 7¼d; Second, 1s 6d. Salisbury: First, 1s 9½d; ond, 1s 8½d. Skipton: First, 1s 4d. Truro: First, 1s 4d; Second, 3d. Welshpool: First, 1s 7d; Second, 1s 5d. *Carlisle: First, 4d. *Derby: First, 1s 6d. *Ipswich: First, 1s 9d; Second, 1s 4d. incoln: First, 1s 5d. *Shrewsbury: First, 1s 7d; Second, 1s 6d. ork: First, 1s 8d; Second, 1s 7d.

FOWLS.

Per lb.—Birmingham: First, 1s 7d; Second, 9d. Doncaster: st, †4s 6d; Second, †4s 0d. Dorchester: First, 1s 9d; Second, 8d. Exeter: First, 1s 8d. Hereford: First, 1s 6d. Llandilo: st, 2s 3d; Second, 2s 2d. Newport (Mon.): First, 1s 9d; Second, 4d. Truro: First, 1s 5d. *Derby: First, †5s 0d; Second, †4s 0d. swich: First, 2s 0d; Second, 1s 10d. *Lincoln: First, †5s 6d; ond, †4s 0d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: st, †5s 6d; Second, †4s 6d.

DUCKS.

Per lb.—Birmingham: First, 1s 6d; Second, 1s 4d. Doncaster: st, †5s 0d; Second, †4s 6d. Exeter: First, 1s 7d. Hereford: st, 1s 4d. Llandilo: First, 2s 3d; Second, 2s 2d. *Derby: First, 0d; Second, †4s 0d.

* At these markets the prices quoted are for sales by proers direct to consumers. At other markets prices are those d to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, July 8th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

APPLICANTS FOR MEMBERSHIP.

Hatch, Mrs. M., Claremont Lodge, Porchester, nr. Fareham, Hants
Crossby, Major W. E., The Chestnuts P.F., Kenneth Rd., Thundersley, Essex.
MacKenzie, James, Seaview, Auchengate, Barassie, Ayrshire.
Phillips & Son, G., Hill Crest P.F., Cock Lane, High Wycombe, Bucks.
Kell, Mrs. E .R., Nettleton Lodge Farm, Caistor, Lincs.
Hutchison, J. A., Little Canons, Epping Uplands, Essex.
Lawson, F. E., Mountain Ash, Wokingham Rd., nr. Wellington College Station, Berks.
Dew, H. G., 13, Sussex Avenue, Ashford, Kent.
McLaren, Peter, Torrie House P.F., Kingsbarns, Fife.
Mrs. Robins, The Chalet, Upper Colwyn Bay, N. Wales.

Classified Advertisements.

(PREPAID RATES).

1d. per word—minimum charge, 1s. 0d. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS, per line, extra 9d.
DAY-OLD CHICKS, ,, ,, 1s.
DAY-OLD CHICKS ,, ,, 1/6

The number of letters, punctuations and spaces between words should be totalled, when the following table will be of assistance:—

9d. size allows for Thirty-one to one line.
1/- size allows for Twenty-seven to one line.
1/6 size allows for Twenty-one to one line.

When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

N.B.—Advertisements, unless accompanied by correct amount, will not be inserted.

Advertisements must be distinctly marked with the Heading under which they are to appear.

Advertisements must be written on a separate sheet of paper, and one side of the paper only.

Name and Address to be counted. In the case of a Box Number being used, the words, "Box," "Eggs," 94, Farncombe Street, London, S.E.16, to be counted as eight words, i.e., making a total extra charge of 1s. 8d. (1s. for Box; 8d. for address) per insertion.

Advertisements must reach this office
FIRST POST FRIDAYS
for insertion in the following Wednesday's issue. Those received after this time will be inserted in the next issue.

PLEASE WRITE CLEARLY, and TO AVOID MISPRINTING OF STRAINS, NAMES AND ADDRESSES, THESE SHOULD BE WRITTEN IN PRINTED CHARACTERS.

Displayed Advertisements.

Ordinary Page, £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 6d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Positions by arrangement. Discounts for Series. Full Scale of Advertising Rates on application.

Advertisements, addressed to Mr. S. H. BURLES, "EGGS," 94, FARNCOMBE STREET, LONDON, S.E.16, **MUST REACH US BY FIRST POST FRIDAY MORNINGS,** for insertion in following issue. Those received later will be inserted in the next issue.

A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to The Beeches, Rudgwick, Sussex.

EGGS.

FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C., Longwick P.F., Princes Risborough, Bucks. R.I. Reds, White Leghorns. Eggs, Chicks, Stock Birds. List free. Satisfaction insisted on. (See under Ducks and Drakes also).

PULLETS.

FOR SALE.

Captain Strong, R.N., offers Black Leghorn 1925 Pullets and Cockerels; sound in colour, lovely yellow legs.—Apply, Hillerton Poultry Farm, Bow, Devon.

White Wyandotte Pullets, four to five months old, bred from hen laying 253 2⅜oz. eggs pullet year; sire from 260 2¼oz. hen. Price, 10s. 6d. each. Few Cockerels, 12s. 6d. each.—Reverend Goodwin Courtman, Awre, Gloucestershire.

SISTERS SILVER MEDAL WINNERS, BENTLEY, 1923, R.I.R.
Sire's dam, 283.
BLACK LEGHORNS, SNOWDEN'S.
238-260. Sire's dam, 266.
WHITE LEGHORNS, CAM'S.
200-260. Sire's dam 275. All Pullets trapnested. Chickens, £3, 100; Eggs, 25s., 100; Two and Three Month Pullets, 7s. and 9s.; Cockerels, 4s. and 6s each. Quantities cheaper.—Ekins, S.P.B.A., Grange, Wellingborough.

1925 PEDIGREE PULLETS.
RHODE ISLAND REDS.
Mrs. A. J. Moore's large egg strain. The best strain of "colour" with "eggs."
BUFF ROCKS.
Splendid colour and health. Carriage paid on 10 birds. Approval. Cash or deposit with Editor.
R. S. KEEP,
EAST BUDLEIGH,
DEVON.

Ful-O-Pep Laying Mash
and
Ful-O-Pep Growing Mash
are renowned the world over for producing profitable poultry.

FUL
TRADE **-O-** MARK
PEP
POULTRY MASHES

NO MIXING: NO HEATING WATER: NO TROUBLE

Write for the revised edition of the Ful-O-Pep Handy Monthly Guide—the most valuable book on Incubation, Rearing and Poultry Husbandry. This book has detailed suggestions for every month in the year. Also 12 monthly egg charts for you to record your eggs. Sent free and postage paid.

Ful-O-Pep Poultry Feeds are made and guaranteed by Quaker Oats Ltd., 11 Finsbury Square, E.C.2.

PULLETS.

FOR SALE.

Black Wyandotte Pullets, early
ruary hatched; Essex strain; 10s ea
Apply, C. I. Sandys-Thomas, Andersea,
lington, Somerset.

Pullets, three to four months old, 6
7s. 6d., 8s. 6d.; carriage paid.—Wood
Bacon, Arle Poultry Farm, Cheltenha

Rhode I. Red and White Leghorn Pu
5½ months; 10s. Three months, 6s. 6d
proval; carriage paid.—Bourne, We
Norfolk.

Pedigree Trap-Nested White Wyan
Pullets, bred from L2 tested parents.
FOUR MONTHS OLD, 8s. 6d. EAC
FIVE MONTHS OLD, 10s. 6d. EAC
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Wednesday, July 15th, 1925.

EGGS

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THE
SCIENTIFIC POULTRY BREEDERS ASSN.

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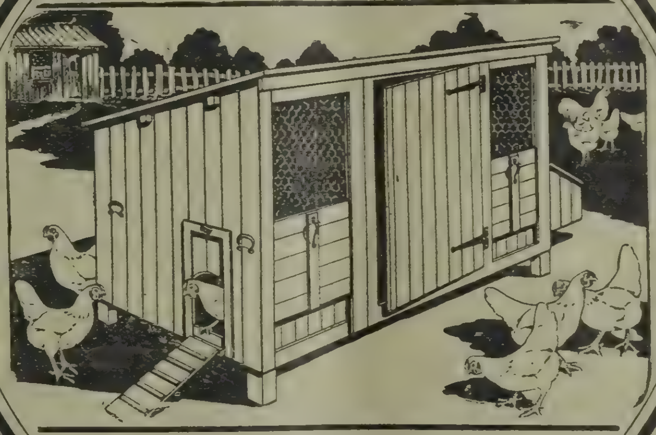

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EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, JULY 15th, 1925.

Editorial.

ROUP.

The following reprint from the "Veterinary Record" of June 13th, 1925, will be read with the greatest interest, in view of the recent heavy losses incurred by Mr. Toovey and others during the past few weeks from Avian Diphtheria and Fowl-Pox:--

VACCINATION AGAINST DIPHTHERIA AND FOWL-POX WITH ANTI-DIPHTHERIA.

METHOD OF PROFESSOR DE BLIECK AND DR. VAN HEELSBERGEN.

By Dr. T. van Heelsbergen, Bacteriologist at the Veterinary University, Utrecht, Holland.

The vaccination against fowl diphtheria and fowl-pox is based on the aetiological similarity of both diseases, and on the fact that the great majority of the cases of diphtheria are caused by the so-called pox-virus.

It was brought to light by the researches of Carnwath (1), Uhlenhuth (2), Manteufel (3), v. Ratz (4), v. Betegh (5), v. Heelsbergen (6), and others. that both diseases are caused by one and the same virus. This does not do away with the fact that in one case the virus shows a decided avidity for the mucous membrane, whereas in the other case it has a special predilection for the skin (comb and wattles). Mixed forms very often occur. The yellow spots on the mucous membranes of the mouth, throat and eye are, however, generally the most conspicuous, so that these symptoms have become the centre of interest, bringing this disease to the knowledge of everybody under the name of diphtheria.

If, however, one takes the pox material from the comb, and brings this directly, or via the blood stream, in contact with the mucous membrane, then the yellow diphtherial spots put in an appearance.

The yellow spots on the mucous membrane and the eruptions on comb and skin are caused by one and the same infectious agent.

When a hen has suffered from the mucous membrane form of the disease, then she has become immune against the skin-form (fowl-pox) and vice-versa.

THE VACCINATION.—The Fowl-pox virus, either in altered or unaltered form, is chiefly used as a vaccination material against diphtheria and fowl-pox.

1st.—In unaltered form (Basset-Beach (7) virus inoculation) it will always remain a danger in regard to the increase in the number of cases of diphtheria.

2nd.—In altered form the virus can be divided into:—

(*a*) Killed virus (Beach), 8.

(*b*) Chemically or physically attenuated virus (Beach-Verge-Panisset), 9.

(*c*) Fully-living virus, modified virus (vaccine de Blieck and van Heelsbergen).

The vaccination with unaltered virus is undoubtedly accompanied by some serious danger. Serious reactions and expansion of the disease may be the result. We often observed this.

The months of October, November, and December are the most dangerous in this respect in Holland and Belgium and in other parts of North Europe. A vaccination with unaltered virus may be tolerated as emergency treatment in cases in which the disease already exists in the flock.

Vaccinations with killed virus have never had much success in case of the human variola (smallpox).

Beach contends that his vaccination with killed virus does not protect against the experimental infection. Our manifold experiments on this subject have proved that the vaccination with killed virus only protects to a small extent against spontaneous infection. This is also the experience of a great number of veterinary surgeons and breeders.

Beach 10 has tried to obtain better results by vaccinating twice with this killed virus. After that, in 1922, dried virus and living virus which had been suspended in glycerine have been used. It goes without saying that the immunising results are much better. But we have experienced that such a vaccine can be dangerous; the attentuation brought about by drying is not constant.

In the optimum period of the diphtheria, there are factors at work in nature which can make a chemically or physically attenuated virus virulent again.

In 1923 Beach 11 tried to obtain better immunity by means of a double vaccination. First the fowls are vaccinated with the heated virus, and after some weeks infected with the living virus. The immunity thus obtained is supposed to be altogether sufficient. This method, however, has a practical drawback, viz., the animals have to be caught twice. Besides giving more work, this does not affect the hens favourably.

I have not been able to make out if the inoculation with this sort of virus does not eventually give rise to too serious reactions. We (Professor de Blieck and Dr. van Heelsbergen), 12, 13, have always tried to discover a fully living vaccination material, which is attenuated neither physically nor chemically, which always causes a local pox eruption, and never gives rise to generalisation, which is constant for all these properties, and which protects for a long time against the experimental as well as against the spontaneous infection.

After having experimented for over three years, we have succeeded in preparing such a virus. Because of its absolute innocuity, this vaccine is especially suitable for preventive purposes—i.e., when no cases of disease occur in the flock. The inoculation should, however, also be applied to infected flocks in order to prevent the spreading of the disease. The name "Antidiphtherin" has been given to this vaccine in order to distinguish it from others.

GENERAL METHODS OF APPLICATION OF DIFFERENT VACCINES AGAINST DIPHTHERIA AND FOWL-POX.

Subcutaneous.—This method of application has the advantage that it works quickly. It has, however, also some disadvantages. When dead vaccine (1st Method, Beach) is applied, the subcutaneous injection is the most advisable, since this killed virus is no longer fit for cutaneous application, as it does not give a reaction in this way.

The immunising powers of killed virus, however, is small; but when using living or attenuated virus, we should bear in mind that, along with the real pox-virus, we inject a number of other living microbes.

It is difficult to state which of these are the most noxious, but in the case of the subcutaneous injection of living virus we often see the hens decrease in weight and a local necrosis set in.

The Intradermal Injection is used in the case of vaccination, as applied by Verge and Panisset. A smallpox virus weakened by carbolic acid is used as vaccine. It is evident that when using this intradermal method, only small quantities of vaccine are injected. This does not, however, prevent generalisation of the action when injecting according to this method.

The Cutaneous Application.—Recently the skin has proved to possess a very important immunising power (Besredka-Pondorff and others) against various infections. This especially holds good for those diseases which have their origin in the epithelium.

The variola (smallpox) can be looked upon as the prototype of these diseases. The classic Jenner's vaccination is also based on this property. It has, therefore, been our aim to make the vaccination against the diphtheria and pox of the hen analogous with the human smallpox vaccination. In our opinion it is advisable to call forth a pox eruption on the skin of the hens, similar to the vaccination eruption of human beings, which only occurs locally, and never gives rise to generalisation. We, therefore, at first applied the vaccination on the comb. This spot has the advantage of being easily accessible for the application. Experience has, however, proved that this spot has its disadvantages.

In order to obtain immunity, it is absolutely necessary that one or more inoculation pocks should appear. When the comb is hyperaemic and well developed the inoculation pocks generally manifest themselves very distinctly.

In the case of small or shrivelled combs (non-laying hens) the vitality of the epithelium is often so greatly diminished that an insufficient number of inoculation pocks occur.

We have, therefore, tried to obtain a skin vaccination which yields a re-action of 100 per cent. for sensitive hens. It seems to us that we have attained this end by means of an application of our vaccine in the skin-follicles. The fowl-pox virus is by origin a follicular virus.

INOCULATION METHOD BY DE BLIECK HEELSBERGEN.

This inoculation is based on two principles:—

1st.—A thoroughly living vaccination material, the vitality of which has not been decreased either physically or chemically, which always gives rise to a local pox-eruption, which never generalises, which immunises against the experimental as well as against the spontaneous infection, and which is constant for all these properties during all seasons.

2nd.—A way of application which is analogous to the classic. Jenner's inoculation, viz., a skin vaccination. 200,000 hens have been inoculated in Holland, Belgium, Germany, and Switzerland, according to this method, during the winter of 1924-1925 without our receiving one single complaint about too serious a reaction or an insufficient immunity. The vaccination was applied preventively in infected as well as non-infected flocks, whereas vaccination of infected hens often had a favourable influence.

We were never informed that the hens which had been vaccinated prophylactically were affected with this disease during the following winter period.

Taking into consideration that the disease chiefly occurs during the autumn and winter months, it is advisable to perform this prophylactic vaccination, which is applied regularly every year in the greater part of the best known poultry farms in Holland.

Out of the very many favourable results, of which I was informed, I mention the following only:—

In the Dutch Test Breeding Station for Poultry Breeding at Beekburgen, and in that at Horst, also in

(Continued at Foot of Column on Next Page).

THE UTILITY DUCK CLUB AND THE NATIONAL UTILITY POULTRY SOCIETY.

NATIONAL DUCK EGG-LAYING TEST, 1924-25 HELD AT BENTLEY, SUFFOLK.

Report for Eighth Period—16th May to 12th June, 1925.

DUCKS. Towards the end of month the daily egg yield showed a decrease, due to a number of ducks having started their annual moult

The average for 32 weeks is now 125.60. Highest average per bird still held by Mr. H S. Godsmark (Sussex) Three White Runners with an average of 166.67 eggs. Miss Cavanagh's (Dublin) Five Fawn and White Runners still lead in Championship Section with average of 162.80 per bird.

The highest score for month was made by Messrs. Berry and Adams' Three F. and W. R's with score of 80 eggs.

The increase in broodiness amongst ducks referred to in last report was very marked during month under review; only a few cases, however, were troublesome, the majority quickly recovered, and have not, therefore, been specially noted on report.

The size of egg, though in most cases quite up to standard, is not generally so good, but this is often the case after a lengthy period of heavy laying, and after a long spell of hot weather.

One duck died during the month. The Ministry of Agriculture's post-mortem reports reads: "Rupture of spleen and haemorrhage into abdominal cavity." A. E. BARR.

Figures are Total Eggs Eight Months (32 weeks).

Section 1. Championship (Five Ducks).—Miss E. Cavanagh (F. and W R.), 814; R. A. and A. M. Johnson (W.R.), 718; Capt. R. A. Long (K.C.), 708; Chivers and Son (K.C.), 717.

Section 2. Khaki-Campbells (Three Ducks).—A. N. Dickson, 495; Oscar C. Brown, 470; Miss Harrison Bell, 464; Maunder and Colson, 454; Capt. Maxwell, 426.

Section 3. Indian Runners (Three Ducks). (a) Fawn and White Runners. Mrs. G. Streatfield, 422; A. H. Fox-Brockbank, 413; H. B. Carrington, 405; Ben Clark, 399. (b) White Runners: H S. Godsmark, 500; E. and T. Bullmore, 439; R. A. and A. M. Johnson, 419

Section 4. Buff Orpingtons (Three Ducks).—Mrs. Wyndham Malet, 383; Lucas and Power, 385.

Section 5. Any Other Breed (Three Ducks.—F. Gardner, 426; Dr. T. Henneppe, 387; Mons. Grandjean, 373.

The use of Poultry against Farm Pests.

By A. ROEBUCK

(Adviser in Entomology, Midland Agricultural College).

(*Continued*).

VARIOUS CATERPILLARS.—A number of caterpillars of serious pests have been fed successfully to fowls, but against these fowls have a more limited use, chiefly because of the dangers of damage being done by the fowls themselves. For example, the caterpillars of the *Large White Butterfly* (Pieris Brassicae), the *Small White* (P,rapae), and the *Green Veined White* (p. Napi) are all greedily eaten. If one is bold enough to run fowls amongst growing cabbages the benefit they do in keeping down these will be great. At the same time there is a certain risk in them eating a certain amount of leafage. In the same way another serious pest of the cabbage tribe could be combatted, namely, *Cabbage Moth* (Mamestra Brassicae), the caterpillars of the white feed on the tops from June onwards.

On turning up soil in a garden one often finds a shining creamy white caterpillar with a brown head, very slow in its movements and up to 1½ inches in length. This is the Larva of a *Swift Moth.* Two species of Swift Moths have larvae which are pests, namely, the *Ghost Swift* (Hepialus Hummuli), and the *Common* and *Garden Swift* (Lupulina), the latter being the smaller. They are found in fields, also especially on grass land, and where crops are left several years. They are root feeders, and are relished by fowls. They are exposed by tillage operations from August to May, and as red-brown chrysalids, also readily eaten, during June. Running fowls on the land while ploughing is in progress will tend to combat these, while at the same time they are dealing with other and possibly more serious pests.

INSECTS OTHER THAN PESTS.—It should be remembered in connection with the problem of control of insect pests by fowls, that insects which are not pests are equally readily eaten. It might be argued, therefore, that in a way a certain amount of harm is being done by using fowls except in special cases of serious outbreaks of pests. This is particularly the case in soil insects, as there are species of predacious insects much better able to reach the soil insects than fowls. On the other hand there is yet no direct evidence of the amount of good predacious insects may be expected to do. Against such serious pests as wireworms and slugs, there is evidence that very little good is done by predacious species. The writer has only followed one group of such friendly insects, namely: the Ground Beetle (Carabidae). The grubs of these are greedily eaten by fowls when the soil is turned up by ploughing or digging. They have not, however, been found eating any pest up to the present, small worms and maggot of midgets appearing to be their chief food.

CONCLUSION —It will be seen that, in addition to the pests already cited in the previous articles, there are others which do harm in varying degrees, against which fowls can be used with considerable success.

There appears, moreover, to be no reason to suspect that fowls will do harm by eating insects which are useful to the farmer.

The manurial value of the fowls running on the land, and the profits which accrue from the keeping of fowls are added benefits not considered in these notes.

BRITISH BLACK BARNEVELDER CLUB.

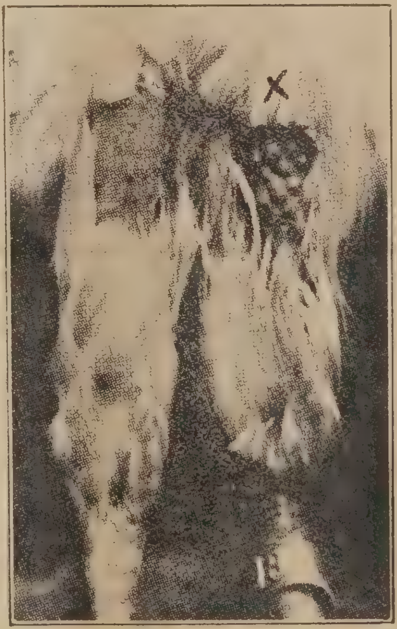
A committee meeting of the British Black Barnevelder Club was held at 3, Vincent Square, on Monday, June 22nd, when important rules as to the registration of breeding stock in the possession of members were passed, and measures taken to ensure purity of strain. Mrs. J. M. Walker presided, and announced the gift of three more cups to the club and an increase in membership.

It was decided to put up three Club Visiting Cups at Romsey Show, Cambridge, on July 23rd, where there will be two classes for Black Barnevelders.

EDITORIAL.—Continued.

the laying competition at Paturages (Belgium), as well as in the best known poultry farm at Welleman Bros., at Buurmalsen, the inoculation has been applied prophylactically during two or three years. Whereas these concerns had to deal with diphtheria every year before the vaccination, they have been absolutely free from the disease ever since.

The vaccination has become obligatory for various laying competitions before the hens are forwarded. I gave reports on the subject on the Third National Congress for Poultry and Rabbit-Breeding at the Hague in 1925.



x Positive Re-action with Antidiphtherin, five days after vaccination. The other leg shows a negative reaction.

Modern Poultry Feeding.

By TOM NEWMAN.

Continued from Page 2.

RED FISH MEAL.

This is generally made from herrings, but there is no doubt that a good deal which comes in this category is just the refuse of the markets. As the herring meal contains as much as 10.20 per cent. of fat or oil, the first process in the manufacture is to get rid of the bulk of this; this is done by hydraulic pressure, or by benzoine The analysis of this is very variable, and it oftens contains an excess of oil, which gives a fishy taste to eggs. This will not occur with white fish meal. Herring meal is much darker in colour than the white fish meal, and may vary from a dirty yellow to a dark brown. It is always a risk to buy this without a guaranteed analysis, as it is the salt and oil content which are most variable, and there have been very many cases of salt poisoning from this cause. I have never known white fish meal to taint an egg, even when used up to 25 per cent. of the mash; but this has often occurred with red fish meal. As far as the vitamins are concerned, they are not present in either the red or the white meal. Our experimental work has proved fairly conclusively that for years an excessive amount of fish meal has been used, especially on the commercial egg farms. This is so much waste, and has no doubt been injurious, as it has undoubtedly caused kidney trouble. One indication of this is the dark-tipped combs, and the state of the excreta. These symptoms were not at all uncommon on the commercial egg farms a few years ago, and to "Eggs" and the S.P.B.A. belong the credit of drawing attention to it, and so saving incalculable waste.

One may say that, with properly-balanced rations, the content of fish meal need not exceed five or six per cent. of the total ration to give the best results.

GREAVES.

This is the membraneous matter which is mixed with animal fat. When the latter is melted down for tallow, this is separated. The fat is first boiled down, and floating to the top is removed by skimming. The remaining fat is passed through a powerful press, leaving the membraneous matter in the form of a cake or block of dark colour. Years ago Greaves were sold as such, and were much used by poultry-keepers; now it occasionally comes to hand as a low-grade meat meal.

SUNFLOWER SEEDS.

These are recommended for poultry during the moult. They are very rich in oil, and the protein content is high. But we can achieve our object without their use, and the high fibre content, and its nature somewhat neutralises their value.

Analysis:—Protein, 14.2; Carbohydrates, 14.5; Fats and Oils, 32.3; Fibre, 28.1; Ash, 3.4.

COCOANUT MEAL.

This is the residue from the manufacture of oil from the cocoanut. I have used it during the war in a wet mash with complete success, and have often wondered that it has not been given more consideration as a foodstuff by poultry-keepers at the present time. A mash of one part cocoanut meal, soaked in water for a couple of hours, mixed with four parts middlings, one maize meal, and half part fish or meat meal gave excellent results. I have never tried it in dry mash, but there seems no good reason why it should not be used if the price is economic. It is produced by the "old" and "new" process. In the former the oil is extracted by pressure, in the latter naptha is used. The "old" is higher in fat content than the "new," and slightly lower in protein. In hot weather, unless kept perfectly dry, it has a tendency to turn rancid.

Analysis:—Protein, 22.1; Carbohydrates, 47.9; Fibre, 11.0; Fats, 8 4; Ash, 6.0.

RYE.

Rye is not often used in this country as a poultry food, although some of us were compelled to do so for a time during the war. My own experience of it for a few weeks was that it caused serious digestive trouble, when fed in the same quantity as we usually feed grain; that the birds did not eat it readily, and my conclusions were that as a poultry food its value is not great, and there is some danger in using it. Its average composition is similar to that of most of the cereal grains.

The analysis is:—Protein, 11.8; Carbohydrates, 73.2; Ash, 2.0; Fibre, 1.8; Fat, 1.8.

In spite of the fact that the fibre content is lower than that of maize, rye is much more difficult of digestion.

BLOOD MEAL.

Dried Blood has a very high protein content, but is poor in calcium and phosphorus. It is not sufficiently appreciated by poultry-keepers, the high price being probably considered prohibitive. This may be thought to be compensated for by the high protein content, but we lack evidence that there is real advantage to be derived from this additional amount of protein, and it may be said with some degree of certainty that good samples of fish meal or meat and bone meal are more valuable to the poultry-keeper on account of their calcium content, than the blood meal with its higher protein content. A mixture of miller's offals and blood has been sold, and perhaps is still sold, as blood meal. This would, of course, have a very much lower value.

Analysis:—Water, 9.7; Ash, 3.3; Protein, 82.3; Carbohydrates, 3.8; Fats, 0.9.

HANTS COUNTY LAYING TRIALS.

Report for Ninth Period ending 23rd June, 1925.

Figures are Eggs and Points respectively.

Section A.—H. R. Hunter (W.L.), 68, 325; A. F. C. Holdaway (Pen 1) (W.L.), 59, 236; A. Munro-Spencer (W.L.), 79, 407; R. McKenzie (W.L.), 72, 359; P. H. G. Harper (B.L.), 68, 357; A. F. C. Holdaway (Pen 2) (W.L.), 32, 181.

Section B.—Mrs. J H. Drew (Utility) (B.R.), 56, 285; D. W. Gunston (Pen 2) (W.W.), 52, 283; R. McKenzie (W.W.), 46, 214; J. H. Thompson (W.W.), 41, 208; H. R. Hunter (R.I.R.), 43, 253; Mrs Edwards (R.I.R.), 46, 255.

The Chinchilla Rabbit for Fur.

By H. J. GARDNER.

FEEDING.

Feeding plays an important part in the rearing of the Chinchilla rabbit for fur, as it does for all other animals and birds ; ducks and hens are fed to produce eggs ; cows to produce milk ; the Chinchilla requires stamina to produce a soft silky coat. If the feeding is not correct many ailments will occur, not only to the young, but to the adult stock.

Diet is the most important factor in all life, whether human or animal, so the greatest care must be taken in feeding.

Cleanliness is very important, and must not be overlooked, the food utensils should be kept clean, many diseases and deaths being caused through dirty saucers and stale drinking water.

For food containers, I like the heaviest I can get—medium size, about 5 inch, flower pot saucers or earthenware pots with flanged top, so the rabbit cannot scratch the food out, thus preventing waste. It also prevents the brood does from carrying the saucers into the nest, which they have a habit of doing. For drinking vessels I like the hook-on heavy galvanised troughs. These hang on the wire front, and are easy to fill from the outside. The young cannot sit or fall in these, which very often happens when ordinary saucers are used. Tin, wooden and aluminium troughs are not satisfactory, and should never be used.

Regularity in feeding should be aimed for, indigestion and other ailments can be traced to irregular hours of feeding. The rabbit gets hungry and bolts its food when fed or eats part of its dirty bedding when waiting to be fed, and the breeder wonders why his or her rabbits do not thrive.

It is best to feed twice a day—morning and night. At this time of the year 7 a.m. and 7 p.m. would suit most people. In the winter 8 a.m. and 4 p.m., but whatever times are adopted regularity must be the chief object.

The diet for the Chinchilla rabbit should consist of green food, or roots, clover hay and meadow hay, oats (whole or crushed), and mash. What a rabbit will eat in weight varies. Some are small eaters, others are always hungry and ready for food. It is very unwise to get the rabbits too fat, but see that they get sufficient and do not get poor.

Rabbits have large stomachs, and need a bulky food rather than a stimulating one.

A good menu for the ordinary stock is a handful of oats, or a mash composed of half broad bran and half sharps with a little Sussex ground oats, mixed in a crumbly state with water or milk, and fed for the morning meal. Evening—green food or roots, and plenty of hay in the hutch at all times.

Some breeders of the Chinchilla rabbit give wheat instead of oats, but I think this is a mistake, because wheat tends to give the rabbit a harsh coat, which is not wanted in the Chinchilla.

With green food it is best to give a variety at the one feed as far as possible. Many wild herbs and weeds can be gathered, such as Dandelion, Coltsfoot, Lady's Mantle, Groundsell, Plantain (narrow and broad leaved), Shepherd's Purse, Hog's Weed, Cow Parsley, and many others which abound in the hedgerows.

At the present time, being very dry, I cut clover and grass, feeding straight to the rabbit, and have had no trouble with scours (diarrhoea). If the weather is damp, green food should be gathered the day before feeding and spread out to dry.

Parsley is good to give does for the purpose of helping to bring them into breeding condition.

There are many crops that can be grown if ground is available, such as Cauliflowers, Broccoli, Carrots, Swedes, Chiccory, the different sorts of Kale, Beetroot and Parsnips are also good.

For does in kindle give as much green food as they will eat, but very little oats or mash. When the young arrive give the doe a good feed of bread and milk, also give crushed oats twice a day ; give green food and plenty of hay.

Young stock when taken away from the mother should also be fed on bread and milk for the first few days (weeks if possible), then gradually be brought on to eat the ordinary menu. Be very careful when giving green food, a little to start with, gradually increasing same. If a case of scours appears, stop all green food except Shepherd's Purse, which can be fed at all times. I have known this green to cure a bad case.

Milk is beneficial to all stock, and rabbits thrive on it. Goats' milk is the best, and seems to be more palatable to them ; cows' milk is very good, so also are the different brands of powdered milk now on the market.

Stud bucks should be well fed. They should receive a full portion of mash, oats and green food, also hay. If you find them to be off colour, feed them at noon as well as morning and night.

Hutches should be always kept clean, once a week the rabbit should be removed, the floor well scraped; a three-cornered scraper and shovel I find are the best tools to use. Spread a little sawdust or peat moss over the floor, then bed down with good clean straw. For does in kindle bed the inner compartment with soft meadow hay.

Water should be given in the morning with the first meal and emptied out at noon. Does in kindle should have water before them at all times. (Some breeders of rabbits never give water.)

Notes on Utility Ducks.

By A. HAROLD PAINE.

My last article was on the management of the duckling from the shell to eight weeks old, when they were being fed on a mash of (by weight) three parts middlings, one part biscuit meal, one part Sussex ground oats, quarter part fish or meat meal, a mash that should have given them a good start in life. After eight weeks a simpler and less expensive mash may be substituted.

There are many different mashes equally good that may be used, so the one selected should be that of which the constituents are the most easily obtainable in the breeder's locality. Any of the following will be satisfactory (parts by weight) —

Middlings 2, maize meal 1, Sussex ground oats 1, fish or meat meal ½.

Bran 1, Kositos 1, middlings 3, fish or meat meal ½.

Sussex ground oats 2, pea or bean meal 1, maize meal 1; middlings 4, fish or meat meal 1.

Middlings 6, Sussex ground oats 2, maize meal 1, Uveco 2, bran 1, fish meal 1.

Bran 1, middlings 3, Sussex ground oats 3, fish meal ¾.

Equal quantities of bean meal, maize meal, middlings, barley meal, and ½ fish or meat meal.

Middlings 6, bran 1½, maize meal 1½, fish or meat meal 1.

To cheapen the mashes still further boiled potatoes are useful, but should be used only in small quantities, excepting for fattening purposes. The wet mash should be fed at night, and a grain feed of a closed handful of wheat, oats, or kibbled maize should be given to each two ducks in the morning when they are let out of their house. I have often been asked the exact quantity per bird that should be fed, and this is rather difficult to answer, as it depends on the conditions under which the birds are kept. If they are penned and are approaching maturity about four or five ounces dry weight of mash would be the quantity for the evening meal and the morning grain feed as above. If the birds are on free range, then the mash fed at night should be sufficient. An abundance of pure drinking water should always be available, and limestone grit or cockle shell, or both, is required. Whatever green food may be to hand should be freely fed to the ducks at all times.

For those who are contemplating sending their birds to a laying test, it is advisable to put them in separate compartments at an early age, so as to get them quite used to the trapnest or recording house before they are sent away. One of the best houses for this purpose is one that I designed some years ago for six birds. It is a complete house divided into six compartments, each one of which is fitted with a trapnest front, which is hinged, so that the house can be thoroughly cleaned and re-littered easily and quickly. It has a sliding roof which greatly facilitates attention to the birds and the collection and recording of eggs. It is about 9 ft. long, 2 ft. 3 in. high in front, 1 ft. 9 in. at back, and 2 ft. in width. Another duck egg recording house is that shown in the background of the illustration which appears on this page. I designed this especially for those who prefer a simpler method of recording than that of using the usual trapnest. It is the same size as the trapnest duck house just described. It is also divided into six compartments by framed wire mesh partitions, so that the birds, although separated, are yet in sight of one another, which I have always believed to be conducive to good laying. Each door forms the step, and when visiting the birds for purposes of egg recording it can be seen in a moment which has laid. Those that have not "produced the goods" are kept in for, say, an extra hour. By the ordinary method of ringing the birds with different coloured rings the eggs are correctly recorded, and I know of no simpler plan than this.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

WARMTH AND EGG PRODUCTION.

Some months ago I wrote suggesting that we might do something to raise the temperature of our houses during the extremely cold winter months.

I was not suggesting that we should have oil-stoves or run hot-water pipes through the house, but I thought they might be so constructed as to avoid any extremes of temperature.

We have had so much written about hardening the birds, and the value of open-fronted houses. Only a few years ago there were many breeders who contended that the open-fronted house was the preventive of roup. This has been proved to be a fallacy.

Thus we came from one extreme to the other. In the olden days keeping the fowl warm was one of the most widely recommended means of obtaining eggs; but in the attempt to keep them warm, ventilation was forgotten or ignored, consequently outbreaks of roup were very frequent.

In an early edition of Lewis Wright's book on "Poultry" he describes conditions obtaining in 1813. In speaking of Scotch fowls it is stated :—

> "The hens are kept in as dry and warm a place in the house as possible; in cottages they generally, during the night, sit at no great distance from the fireplace, the consequence is that the farmer, whose poultry are in the night-time confined in places without a fire, obtain no eggs; the poor have them in abundance."

It is possible that warmer houses would mean a better solution of the winter egg problem than artificial light, and surely there is some genius amongst us who can design a house so constructed that the temperature shall not fall below freezing point at any hour of the night.

I am inclined to think that the open-fronted house is responsible for roup, because in extremely cold weather the birds crowd on the perches, and such an atmosphere must be conducive to colds and roup.

"THE BEGINNER'S POULTRY BOOK."

"The Beginner's Poultry Book," by E. T. Brown, published by the Religious Tract Society.

Mr. Brown, in his introduction, states that "Saturday is eagerly awaited by every schoolboy, for that is the day on which he receives his pocket-money. The sum may not be a very large one, but for days beforehand plans are laid as to how it can best be spent. Wouldn't it be infinitely better, however, to earn the weekly allowance rather than to take it each time as a gift? In a sentence, are not earnings better than a dole?"

I am afraid many of us did not spend many days beforehand planning how we should spend our weekly pocket-money. It did not require much planning.

Obviously the book is written for boys, and his next remark is :—

> "Have you ever thought about taking up a hobby which would bring you in 4s. to 5s. a week?"

And as an inducement he says:—

> "Start keeping a few fowls, and you will have eggs to sell to mother, and occasionally a plump chicken for some special red-letter day, such as father's birthday or some other joyful event."

If mother can be persuaded to dole out the pennies to feed the fowls her adoring son might enjoy the eggs laid, and as a reward father **might** have a plump chicken on his birthday.

By this means we can easily see how that four or five shillings a week is to be made.

Mr. Brown assures the "Young Hopeful" that a pen of ten or a dozen really good laying hens will keep mother well supplied with eggs, and should bring him in four to five shillings a week clear profit, after food has been paid for. A nice little profit of just over £1 per year per bird, and we can see dear little Johnny as a budding poultry farmer, calculating that if ten hens bring in £1 a year profit per bird, then one thousand hens should bring in one thousand pounds, and so the little man's future in life is settled by his adoring parents.

A little later on we have a chapter entitled "How the bird should lay":—

> "If you secure really good birds in the first place, and they are not much dearer than low-grade fowls, each pullet—that is, a bird during its first laying season, say from six months old to eighteen months old—should lay from 200 to 240 eggs."

Well, that is undoubtedly how the birds "should lay"; if they would only do as they should.

Mr. Brown then goes on again to assure "Young Hopeful" that each pullet should bring him in from 20s. to 25s. a year clear profit, and each second-season bird from 15s. to 20s. True, he adds, "this is not easy money."

The second chapter is devoted to the "Cost of Starting," and the way the author teaches his interested pupil how to find the money to start, and what subtle arguments to use to mother to induce her to help raise the capital, is surely worth the price of the book to any boy with a commercial mind.

Father is to be appealed to through his stomach. He is to be told of the lovely chickens there will be to sell to mother when they are fifteen to eighteen weeks old, and how splendid it will be when there are one or two boiling fowls which mother could have at a reasonable price.

A further point that can be brought forward is in teaching the "Young Hopeful" how to make his own poultry house and appliances, which "will make laddie ever so useful in the house, as he will always be able to make mother anything she needs in the way of meat safe, baking board, or other little things."

Space prevents my making much further comment on the book. There is some useful information for the "Young Hopeful" as to which breeds he should choose, the making of the houses, erecting the run, "How fowls must be fed," "How food is digested," "What and how to feed," "How to hatch chickens,'" "Rearing chickens," and a good deal on laying ducks and general management, and the book is well illustrated. A whole chapter is devoted to disease.

THE WELLINGHAM EXPERIMENTS.

The intensive experiment is becoming extremely interesting. Miss Malcolm reports as follows for June:—

> "The birds in this experiment are now (June 30th) exactly five months old; 133 eggs were laid in this, the fifth, month, nice in size for first eggs (20 being up to 1¾ ozs.).
>
> The birds feel the spell of hot weather somewhat, and the combs appear to be slightly paler, but on the whole they look extremely well. They are active and scratch vigorously for their grain.
>
> The first layers—i.e., the birds which matured at the end of the fourth month—have again been weighed, and all have gone up in weight in spite of egg production. Many other birds, now laying, have been weighed on the last day of June, so that comparative weights of these also can be made each month.
>
> Seventeen members of the Brighton Poultry Society visited the farm to see the experiment birds on Saturday, June 27th, and were greatly impressed with the birds' good appearance."

It is most satisfactory that the weight of the birds which have started to lay continues to increase. We find the eight pullets which first started at five months old, or under, weigh from 3 lbs. 2 ozs. to 4 lbs., which is very satisfactory for Leghorns, and the pullets which have not yet laid weigh 3 lbs. or over. Many turn the scale at 4 lbs., and there are two at 4.3 and 4.2 lbs. respectively.

The intense heat has tried the birds a little, in spite of the fact that shade has been provided, and the house is roomy and airy.

As all the members of the Brighton Poultry Society are practical poultry farmers it is very satisfactory to know that they were greatly impressed with the health of the birds. So far the experiment has proved a success.

The Council accepted my suggestion that when the birds started laying the grain should be trough fed. This is a test to see whether the heavy feeding of grain would prevent the partial moult.

This should be an interesting experiment. It will be understood that the birds will be allowed to consume as much grain as they like, and it will be of value in another direction which perhaps most of my readers may guess.

What has been achieved so far is, that we have succeeded in rearing 140 pullets to five months old entirely intensively, with only two cases of leg weakness, and entire freedom from any disease, while the mortality has been less than four per cent.

Too much faith, however, must not be put in a single experiment, but at least we may say that it will do much to clear up the problems which have made intensive poultry-keeping a failure in this country.

THE "DAILY MAIL" CROSS-BRED TEST.

Mr J. N. Leigh writes me that a Section is provided in the above Test for testing for the second year some of the pens of first-cross now competing in the 1924-25 Test. As he says, this should give valuable data.

The next test is to begin on 19th October, and will terminate on 19th September, 1926.

Division A. consists of:—Section 1: Leghorns, A.O.V., seven hens. Section 2: Wyandottes, A.O.V., seven hens. Section 3: R.I.R. or L.S., seven hens. Section 4: Any other breed that when mated with a male of a different breed or variety will result in sex-linked inheritance, seven hens. Section 5: First-cross hens competing in the "Daily Mail" Test, 1924-25.

Division. B. consists on Section 1: Any first-cross.

Full particulars of the Test can be obtained from Mr. J. N. Leigh, Dodnash Priory, Bentley, Suffolk.

Further particulars appear in our advertising columns.

Mr. A. D. Bailey, writing from Snape, says he is pestered with innumerable sparrows, and inquires whether one of our members may be able to give him a recipe through "Eggs" for their extermination in quantity by poison or otherwise.

It would be a great boon if someone could do so, but I am afraid there is always a certain amount of risk in using poison.

Perhaps some member can tell us of a more easy and less dangerous way of reducing the number of these pests.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

New Reader (Skegness) writes to say that he has Buff Rocks which have proved wonderful layers. He has been advised to cross them with a White Wyandotte cockerel next year, so that he may detect the sex of chicks when hatched; at the same time he has been assured that the cross will result in improved egg production and hardier chicks. We are riding this sex-linked business very hard, it is likely we shall come to our senses presently. In this case the mating would not give sex-linkage, it should be made the other way, but supposing it did, what would "New Reader" gain? He has a pen of excellent layers. Crossing with a White Wyandotte would not improve their productive powers; it would result in small eggs in the progeny, and probably increased broodiness. It would be uneconomic to kill the cockerels of such a cross even if sex could be detected at hatching. "New Reader" will be well advised to breed his stock pure, mate to the son of good dam with a full year record of 240 or thereabouts and a winter record of 40 to 50; this will effect an improvement, the cross would be a retrograde step.

B. M. (Widnes) writes that there has been a great drop in egg production, his pullets look out of condition and are mopy. He sends me a sample to the mash used, which is made up to a formula given by a friend. The trouble would appear to be due to the excess of fibre in the mash, a very coarsely-ground sample of barley meal is being used, inferior clover meal, and poor bran; this has caused serious digestive trouble, the mash had no "body" in it. As he is using wet mash, I think he will do well to try this formula, parts are by weight:—Biscuit meal 1, maize meal 1, middlings 4, bran ½, meat meal ½. Do not scald the bran, use it to dry off the other ingredients with. In answer to his second question, I should prefer under his conditions, which are intensive, a cross Rhode Island Red-Black Leghorn to the Red and Wyandottes.

G. L. D. (Ayr). You are mistaken; the temperature of a broody hen is not higher than the normal. I do not know of any condiment nor anything else which will induce broodiness, except the plan of allowing the eggs to remain in the nest instead of removing them every day. This has often proved effective. I have heard of vaccination against broodiness, but have no reliable data, and am not inclined to believe in it. If your Reds are so broody, and you are out for egg production, it would certainly be unwise to breed from them. Even if you mate to the son of a non-broody hen broodiness is dominant to non-broodiness, and the progeny would be as broody as the dams. There is no reason to believe that any system of feeding induces broodiness. (2) If the dam of the Black Leghorn male laid such a high percentage of unhatchable eggs, then it would be most unwise to use him in the breeding pen.

G. A. M. (Church Stretton), who has a poultry farm in France, asks me what would be most approximate to Sussex ground oats, which are unobtainable in France. It is very difficult to say. Of course, no cereal is really like the oat, but under the circumstances I should be inclined to use buckwheat meal in conjunction with maize meal to supply the carbohydrates. I can think of nothing which would answer so well.

S. W. (Stokesby) gives me the following case:—"In the first place I possess houses with trapnests. I don't care much for them. I wish to select the best 30 pullets for breeding. I have no time to trapnest myself, as I cannot be tied to the farm all day. Now (1) as a question of economics, would it pay me (the cost to be borne out of poultry farm earnings) to employ a boy for four months at 10s. a week (at least) to do trapnesting? The best 30 birds above 40-egg standard in three months laying period to be retained, provided they are physically normal (1st grade eggs only to count). Or (2) would it be best to select by handling and observation (remember my inexperience)? (3) Is the three months' test sufficient? I assume that trapnesting is recognised as superior to handling. (4) Will a cockerel of a different strain be harmful for mating for egg production—line bred previously? (5) Where can I obtain information re the points of utility double-comb White Wyandottes?" — I do not think it would pay my correspondent to pay a boy 10s. a week to do the trapnesting of his Wyandotte pullets. In spite of his inexperience, I think it would be best for him to select by handling and observation, and even if he were not competent in his own ability he could pay an expert to come and make the selection for him, which would be much cheaper than paying a boy 10s. a week to trapnest such a small number of birds. Again, there is the question of the boy's reliability. The three months' test would be a sufficient indication of which were the best birds in his flock. Trapnesting is certainly superior to handling. However experienced a man may be, he may make some bad mistakes in his estimate of a bird's ability to lay, while the trapnest will give us the actual record of what is done. If the cockerel be from a dam with a good winter record and year's record, there will be no harm in mating him for egg production to my correspondent's own strain. I do not know where he could obtain the information re the points of the Utility Double-comb White Wyandotte, but for his own information I would give him the following, which may help him:—A utility pullet should weigh about 4½ lbs. when coming into production, or say at six months old. The plumage should be tight, with short feather, and flat bone, good capacity—that is, measuring the girth of the bird and not relying only upon the distance between the pelvic bones and the end of the keel—legs well apart, short beak, bright prominent eye, well developed comb, of fine texture, and the same remark applies to wattles and lobes. If he keeps these points in mind he will not miss his best birds. More particularly should he note the head points. The eye is a good indication of the health and vitality of a bird. The comb, lobes and wattles of the activity of the ovary. He should also note the shanks, more particularly should we remark on the flat bone, which should be rather fine. It would pay him to have the Handling and Observation Charts, where he would see all the Utility characteristics of the White Wyandotte depicted.

"Madame" (Lichfield) sends two samples of biscuit meal. Both are good, and are quite suitable for chicks from eight weeks' old onwards. Of the two I prefer the coarser sample containing the meat meal.

"Beginner" (Cornwall) asks rather a curious question. "Would birds—heavy breeds—hatched March 12, 1924, wrongly fed and poorly housed ever since, and having put up very bad records during the pullet year in consequence, although from a good and reliable breeder, be likely to respond to good housing and feeding in their second year—in production sufficient to make them a paying proposition from a commercial egg farmer's point of view? Are they worth buying at 8s. each? When you grade eggs do you weigh every egg that you are doubtful of?"—Much would depend upon how the birds had been reared. If they had been fed and reared badly I would not give much for them, as second-year birds, whatever their breed may be. We know that bad rearing affects both the number and size of eggs. If birds had been fed and housed as badly as he describes, I would not give 8s. each for them. In answer to his last question, if there is any doubt of an egg when grading, there is no option but to weigh it.

W. L. (Bolitho).—(I recently contributed an article to the Lancashire Utility Poultry Society's Year Book. My correspondent from Lancashire now asks the following questions in connection with it.) First, Incubation.—"You inform us that there is a drop of 20 degrees between the egg chamber and nursery drawer. How do you propose to remedy this? It would be very difficult to remedy it. The best suggestion is not to allow the chicks to drop into the nursery drawer, and to clear the incubator every six hours. (2) "Eggs are recommended to be stored in bran, and I am advised to stand them on end and to be turned daily." No, I advise them to be stored on their sides. There is no necessity to turn them daily. (3) "Has the experiment with regard to perforated zinc floors been a success?" Yes, unquestionably it has been a success. Except in one or two instances everyone has written to say that the chicks are healthier and more vigorous. (4) "The first fortnight of a chick's existence you say we are greatly in danger of over-feeding it, yet you suggest bran and Quaker oats always before them, and first week and the second week dry mash. This, on the surface, appears contradictory, and I should be glad if you will clear this point." On the surface it does appear contradictory, but the bulk of the mash and the Quaker oats and bran prevents over-feeding. My correspondent has a pen of R.I. Reds year old which he is gradually losing. The symptoms are the same in all cases—freely losing weight, moping about for about two days; the excreta is watery and of a light yellow colour. When picked up dead they have their legs drawn up to their bodies as if in great pain. I cannot say definitely what is the cause of the trouble. It appears to me they are going light. I should give them cod liver oil at the rate of two per cent. in the mash when they are first taken ill. Better still, I would kill off the whole pen. They do not seem to me to be at all a likely lot to be bred from. (5) "In your article on 'Potatoes' you give three mashes, are these by measure or by weight?" The mashes are by weight. (6) "Will you give me the title of what you consider the best text-book on the market in all branches of poultry-keeping?" I think the "Poultry Manual," by the Rev. T. W. Sturgess, is as good a book as I could recommend. It is published by Messrs. Macdonald and Evans. I do not know a better text-book at the present time.

R. N. (Marlborough) sends samples of bran, meat meal, sharps and S.G.O. The sharps contain rather a high percentage of fine bran. Of the two samples of meat meal, No. 1 is the better; No. 2 contains rather more bone, but they are both of good average quality. S.G.O. are fair, and the bran an average sample. It would be advisable to keep the fowls off the run for a time when basic slag is used. To disinfect an earthfloor of a hen house, the best way would be to remove the top surface for three inches, then lime it and put fresh earth on the top. This would be better than using any solution of chloride of lime. To give the extra soft feed to backward pullets, the best time to do so would be about mid-day. The best feed would be good plump white oats, covered with cold water and allowed to simmer on the fire until all the water is absorbed, then dried off with middlings and fed in troughs.

M. E. H. (St. Byron) writes that she has 20 hens of a flock of 150 laying hens, their combs are dark in colour, and they are droopy, and make a queer sound in their throats—a squawk, as if there might be something wrong with the windpipe. When feeding they stop and gape, and make this queer sound. They are in a house capable of holding 200 birds. The birds have been ill for about four weeks. I cannot say definitely, but this sounds to me very much like diphtheric roup, although I should have expected, as the birds have been ill for some weeks, the symptoms would have developed by this time, which would have left little room for doubt. My correspondent would be wise to send one of these birds to Major Saunders and let him diagnose the cause. The symptoms she describes are only apt to mislead one. Those which have been in that condition for four weeks would hardly be worth attempting to cure.

POST-MORTEMS.

A. G. B. The post-mortem examination of the R.I.R. 1924 pullet showed that apoplexy of the ovary and rupture of the ovarian blood vessels and internal haemorrhage was the cause. The ovary was abnormally active, and this no doubt led to an increase of blood pressure which the vessels could not withstand. A less stimulating diet is indicated for a time, and a few small doses of either Epsom or Glauber salts to lower tension and blood pressure. It would be better if no maize or animal meals were fed for a week or ten days in order to allow the hyper activity of the ovary to subside and regain the normal. This is an accident that is very prone to occur to birds of a highly-fecund strain, such being much more sensitive to over-stimulation than birds less highly specialised.

G. H. The only lesions to be found in the Khaki-Campbell duck were those of intense inflammation of the kidneys, and a slight congestion of parts of the intestines. These conditions suggest poisoning either by some deleterious matters in the food or by some poisonous plant, but do not indicate any specific poison, the lesions being common to the class only. I would suggest that the quality of the food be investigated and a search made for any poisonous plants in the vicinity and accessible to the birds. Potassium permanganate is said to be an antidote to this class of poisons, and should be added to the drinking water in sufficient quantity to tinge it fairly deeply.

NORTHERN UTILITY POULTRY SOCIETY'S LAYING COMPETITION, 1924-25.

Eighth Report—May 16th to June 12th, 1925.

The weather was unsettled until the 4th June, when it became hot and dry, remaining the same up to the close of the term. Sixteen days have been free from rain, an unusual experience for this part.

The health of the flock has been good, only one bird coming into hospital during the 28 days, and for the first time during the test none are in hospital, 99 per cent. have been contributors to the egg-basket, so that laying has been above normal for the season. Broodiness has been very prevalent, 100 passing through the coops, three being noted moulting. The highest collection of eggs was 420, on the 17th May, the lowest being 322 on the 1st of June.

DUCK SECTION.

These competitors are in good health, except No. 7, which is lame. Egg production has been well maintained, and less second-grade than during any one month previously. Number 30 has again laid two eggs. Four ducks have laid the maximum number —28—in succession.

EGG PRODUCTION OF LEADING PENS.

Section No. 1. Championship (10 Birds).—Messrs. Longworth Bros. (W.L.), 1239; Mrs. Crooks (W.W.), 1201; Mrs. Canning Roberts (W.L.), 1171; G. B. Metcalfe (B.L.), 1150; G. H Rayner (W.W.), 1013.

Section No. 2. White Leghorns.—W. Mahon, 655; Jas. A. Rigby, 612; Norman F. E. Kimberley, 603; Richard Bresley, 526; E. J. Stone, 514; Norval Swarbrick, 533.

Section No. 3. White Wyandottes.—Robert P. Virtue, 646; Mrs. Alec Wilson, 584; J. E. Helm, 648; Thomas Pinder, 534; James Hodgson, 539; Beaumont Moorehouse, 520.

Section No. 4. Any Other Variety (Non-Sitting).—Mrs. J. H. Hill (B.L.), 513; Philip K. Berry (B.L.), 457; Ernest Jackson (B.L.), 385; Robert H. Fawsett (B.L.), 472.

Section No. 5. Any Other Variety (Sitting).—Tom Gardner (R.I.R.), 694; J. M. Thomas (R.I.R.), 602; F. and T. Lumb (R.I.R), 572; R. Duckworth (R.I.R.), 539; J. Ashworth (R.I.R.), 522.

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Section No. 8. Small Breeders.—Wm. Machin (W.L.), 691; E. M. Saul (W.L.), 545; T. Lindley (W.L.), 531; Eric Bernard Tingle (R I.R.). 490; Ellis Jenkinson (W.W.), 538.

Section No. 9. Cross-breds.—Mrs. Clara Egar (B.M. and W.W.), 634.

Section No. 10. Ducks.—Wilson Beattie (K C.), 603; Maunder and Colson (K C.), 566; Oscar C. Brown (K.C.), 541; Chivers and Sons (K.C.), 483.

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PERSONAL.

I cannot find words to thank the Council and those members of the S.P.B.A. who so generously contributed to the splendid wedding gift presented me by our President on July 8th. I can only assure you all that I am very deeply grateful. During the years I have been connected with our Association, as Secretary and Editor of "Eggs," I have received many proofs of appreciation. Yet the work which it has fallen to my lot to do has only been made possible by the devoted services of the Council, and the loyalty of the members of the Association. I am glad of this opportunity of acknowledging the kindness and consideration which I have always received, and which has made my work for the S.P.B.A. more of a pleasure than a duty.

TOM NEWMAN.

Correspondence.

RABBITS.

To the Editor of "Eggs."

Dear Sir,—My remarks in the Market Advice Table of July 1st seem to have aroused tremendous interest in members of the S.P.B.A., judging by the amount of correspondence I have received, and although I have so far answered them all personally, I think that in view of the manner in which it has been taken up the answers I am sending to the individuals should prove of interest to the whole of the members, and I give them for what they are worth.

Rabbits for the London Market should be sent the same day as they are killed, and clean paunched and thoroughly cooled. They should be packed in hanging crates, provided by the salesman, each crate holding 36. They should be sent overnight to be delivered here first thing the following morning.

With regard to realisation prices, I append at foot the approximate prices realised for best rabbits last year, but, of course, one must appreciate that it is impossible to state definitely the prices which will be realised this year, but it will give them a guidance to an extent. I would suggest that a much surer and safer way would be for them to make judicious enquiries from the persons who have been dealing in rabbits in their district, and find out what they pay. I think they will be agreeably surprised at the lowness of the figure they state, and at the same time it will be a much more instructive way of finding out that end of the business than I can tell them.

There are one or two things I must definitely impress upon them, and if they ignore them I am afraid they will jeopardise their chance of making the money that I state can be made. The first is that in very hot weather or muggy weather they must refrain from sending rabbits to London. They are of a very very perishable nature during such weather. The second point is that when I notify them to stand down, it means that some district is perhaps rabbiting at full pressure, with the consequence that the London Market is flooded, and they must know that with a market flooded with any particular produce, there must be a very heavy fall in price, which only lasts whilst the glut is on, and the market quickly recovers. They will appreciate that my advice is given to prevent them sending, and making a loss, and not with the object of preparing them for a bad price, and they should so work to stand down on these occasions.

Another point is with regard to suckers. These little chaps may be very nice to eat, but it does not alter the fact that their realisation value on this market is twopence each. One will readily see that they do not pay for carriage, commission and trouble. Where one finds he is forced to take a quantity of these, base the buying price accordingly, and dispose of them locally, knowing that whatever one gets he is doing better than he would by sending them to London.

A rabbit is saleable when it is full-sized, and full-sized means in the region of 2lbs. at the commencement of the season, and 2½lbs. later on.

I trust I have now given sufficient information to enable those interested to get to work, find out the possibilities, and then write and settle any points before committing themselves.

APPROXIMATE PRICES FOR

Month.	Best.		Medium.		Small.	
	s	d	s.	d.	s.	d.
September	1	6	1	3	0	9
October	1	6	1	0	0	9
November	1	9	1	6	1	0
December	1	9	1	3	1	0
January	2	0	1	6	1	0
February	2	0	1	6	1	0
March	1	9	1	6	1	0
April	1	6	1	0	0	6

Yours faithfully,

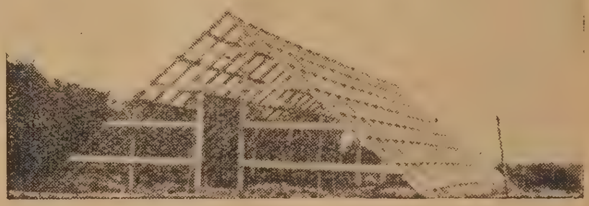
A. W. CLARKSON.

APEX HOUSES.

To the Editor of "Eggs."

Sir,—I have just completed the construction of a medium-sized Apex house, which I propose using as a rough laying house for older stock, the particulars of which may be of some interest to your readers.

The size of the house is 42 ft. by 32 ft., and the height in the centre is about 13 ft. 9 in. Although only to be used as sleeping and laying quarters, allowing 4 feet super per bird, this house will accommodate 336 birds, and the cost of materials, exclusive of labour, works out at £40 in round figures, or well under 2s. 6d. per head, which I claim to be the cheapest thing we have on the market so far.



A

The accompanying snapshots, if you can be prevailed upon to reproduce them, will give a better idea of my method of construction than reams of printing.

The first snap (marked A) shows the framework. The rafters are 21 ft. of 4 in. by 2 in., spaced 2 ft. apart. The two ends are stiffened by 4 in. by 4 in. uprights in the centre, 3 ft. apart and sunk 2 in. into the ground. Six inches from these are two further similar but shorter uprights. Purlins of 4 in. by 2 in. are nailed to the rafters the whole length of the building, back and front, and eight uprights, sunk equally 2 ft. into the ground, support these and keep the frame rigid.

Three-inch wire netting is stretched over the whole framework, except the two doors at each end.

Matching is then nailed the whole length, spaced 2 ft. 6 in. apart, to take the felting with a six-inch overlap.

I should mention that the rafters simply rest on the ground at the base, but to guard against rats I have sunk 1 in. wire netting 2 ft. into the ground the whole way round, covered with earth and turves with a surface drain to take away the water.

The felting is very securely clouted down with galvanised clouts with ½ in. heads, every 2 in., and the base of the felt is covered with turves, so that the wind has nothing to get hold of.

B

The second snap (marked B) shows the building complete with four windows near the ground and six high up. I find this with the openings at the apex and the doors give me not only sufficient light but ample ventilation.

The doors are double, wire and felt on wire at each end so that the outer door on the leeward side can be left open at night.

It is placed in a windy spot, as may be gauged from the windmill just behind the house.

Sketch C shows the mill as also the apex house, and one of the ordinary lean-to houses, 42 ft. by 15 ft., 7 ft. at back and 9 ft. at front, the roof of which was partially blown off during the gales last autumn. This latter house only takes about 150 birds, allowing 4 ft. per bird, and the wood alone cost over £80, apart from felting windows, nails, etc.

I find the lean-to houses far draughtier than the apex house appears to be, but, of course, I must admit that it has not yet stood a winter. Fortunately even if it proves slightly draughty, my Marsh Daisies are quite equal to such minor discomforts.

The perches, I might mention, are placed lengthways down the house, to the right and left of the two doors, and there is ample room to walk upright on each side of them.

The nesting boxes I propose putting in tiers against the two ends, which of course are vertical.

In conclusion, I should in fairness state that the specification of this house was suggested to me by Mr. Longley, of Baldock, Herts, whose three-ply superfelt has been used in its construction.

C

My cost of material is roughly as follows:—

	£	s.	d.
Timber	£23	10	0
Felt (12 rolls)	13	0	0
Netting (3 rolls)	2	0	0
Nails and Clouts	1	10	0
Total	£40	0	0

Yours faithfully,
FRANCIS J. HEMELRYK.
Old Mill House, Partridge Green.

DISEASE AND LARGE UNITS.

To the Editor of "Eggs."

Dear Sir,—May I trespass upon your space again in reply to "C.E.E.," who has quoted my letter in your issue of the 17th ult.?

"C.E.E." is seeking causes—the knowledge of which, in my opinion, is the only remedy that will eradicate flock disease, of which roup is one of the most important. I answer his questions recording my own knowledge, but I will not attempt to cross swords with the masters of the industry. I offer them to "C.E.E." because I read from his letter that he shares my doubts as to the question of size of unit.

Here are the points for and against in answer to his questions:—

Question 4.—The mating of large units. A saving of cockerels, and if valuable birds are used this is a large sum. The saving of time in feeding, etc., and of ground, and plant, such as posts, wire and houses. The small unit has to compete with all the advantages of the large unit, but with this latter unit we have the certain advantage of the higher flock average and more certain fertilisation, which, to my way of thinking, is a most vital point in hatching. Whether the added costs of these two important points are commensurate with the return I am not prepared to say.

An answer to Question No. 1 is difficult, but I do not believe it is possible to rear 1,000 pullets from 4,500 eggs unless the birds were mated up in units of twelve, were hatched in hundred incubators, and brooded in fifties. Whether this is an economic proposition or not I cannot say. I believe the cost would almost equal the losses incurred by the large unit in flock disease. Rearing by hens is another method of which I have no great experience, but from figures I have obtained it is very costly for labour, and the price for broody hens is a serious one during the early hatches.

Questions Nos. 2 and 3 I can only answer in a general survey. Here are my answers to "Does he mean that the large unit is accountable for the high mortality?" and "Is it his belief that it is occasioned by the lack of power to control the unit of 500 chicks?" I have satisfied myself that the smaller the unit the higher the egg average, and I am convinced that this applies to every section of poultry husbandry. The smaller the pen the greater the fertility. The smaller the incubator unit the smaller percentage of infertiles, addled, etc. The smaller the brooder the smaller the percentage that will die from disease. I use the word "percentage." I am not referring to actual QUANTITY—I am actually referring to percentage.

To return, however, a moment to incubators, I use a certain kind of machine, which, in my opinion, is the finest in the world, and yet the 220 size shows at least 10 per cent. to 15 per cent. less hatch than does the 100/110 size. Small units unquestionably produce larger percentages, but the relative costs—losses against outlay—seem impossible to determine with any degree of certainty.

Poultry-keeping is my hobby, but it is a business hobby. I am quite satisfied it is not among those trades that give a handsome return for the capital invested, for this one reason, the danger of flock disease does not make it a fair commercial risk. The large unit will show a handsome return if one is prepared to gamble. Personally, backing a sporting chance is not part of my commercial training. The average man would buy a certain 6 per cent. return for his money against a doubtful 33⅓. Of course, if the 33⅓ chance turns up the 6 per cent. man generally envies him, but I believe, Sir, that for a man to rear on the large unit system, with the increased possibility of flock disease, is taking a risk absolutely out of all keeping with the profit he may reap, remembering that serious flock disease may wipe out—**quite easily**—the acccumulated profit of ten years.

From a sound commercial point of view the small unit is the only way to produce chickens without taking risks far greater than is warranted by the possible profit.

Nevertheless, I do not believe that the small unit method will show a decent return. This, however, is not the fault of the method. It is simply the matter of the organisation of the industry itself, and when the time comes, as it certainly will, when English new laid eggs command an economic price for the producer, the man with a disease-free, small unit poultry farm will be the one who will prove my theory to be correct.

Might I respectfully repeat, Sir, that these are my personal opinions, with which I am sure many with far more experience will entirely disagree; but I am not immediately concerned with these divergent opinions. I have only endeavoured to answer the queries of "C.E.E.," who shares, I believe, with me the opinion that the small unit is the only line upon which the poultry industry can develop as a paying proposition.

Yours faithfully,

H. L. S.

P.S.—Without venturing to criticise the methods of Mr. Toovey, who I am sure shares the sympathy of all poultry farmers worthy of the name, I would add that the only hospital which finds a place in my small organisation is located immediately below my copper!

AN ENQUIRY INTO ROUP.

To the Editor of "Eggs."

Dear Sir,—It is obvious that Mr. Toovey's recent articles on Roup have been eagerly read, and further instalments impatiently awaited.

The widespread interest aroused by these articles, the painful reminder of this ever-present lurking danger, the sympathy which the whole industry is showing for Mr. Toovey, together with the realisation of the sad truth that advancing science has, so far, failed to point the way to the mastery of this disease, gives one pause at such a time, and sets one wondering whether a unique opportunity is not now offered to the industry to seize on this passing moment to take action, and try to obtain for itself a definite step forward.

Mr. Toovey closes his article in "Eggs" of 17th June with the paragraphs:—

> "If other sufferers will communicate their experiences, even anonymously, as may be quite necessary, we may, between us, be able to do some good."
>
> "I feel quite sure the disease can be cured and can be stayed before complete ruin takes place, etc. . . . . . ."

Mr Toovey proposes pooling the experiences of sufferers for the benefit of others—truly a grand lead, and worthy of its author, and I trust that both he and those associated with him will realise that I am only following that much-appreciated lead if I give my grounds for making a further and more far-reaching suggestion.

Suffering is undoubtedly an able teacher, but it is an unfortunate, though natural fact, that not all sufferers are capable of making correct deductions, or of coming to sound conclusions; few indeed are sufficiently equipped scientifically, not all can keep an open mind, many are biassed, depression obscures the view of others. One recommends one treatment, one another, and who is to say which is, or is not, right or wrong.

Mr Toovey is right, however, for is not the whole ndustry a sufferer, and the greatest one of all, in a wider sense of the word?

May I suggest a far more comprehensive pooling of knowledge than outlined by Mr. Toovey, namely, that the Minister of Agriculture be approached through the National Poultry Council, with the object of getting an official Committee of Enquiry set up, with their terms of reference CONFINED SOLELY to searching out he causes, prevention and cure of Roup in all its forms, with special recommendations for the guidance of future research.

The Chairman of this Committee should be a man of wide experience in conducting enquiries, appointed by the Minister of Agriculture, and he should be assisted by most carefully picked, practical and scientific men, *selected with due regard to their ability to prosecute an enquiry.*

This Committee should have the power to invite and examine in secret session any person connected with he Industry or its associated sciences. By this means hey should be able to collect and collate every scrap of useful evidence available, and be able to reach horoughly-informed conclusions.

I am not by any means blind to the difficulties of carrying this suggestion through. On the other hand, I would not have written it were I not satisfied as to ts practicability.

Since drafting the foregoing, I have received my copy of "Eggs" of 1st July, and see it stated therein that you, sir, propose to move a resolution at the next meeting of the National Poultry Parliament asking for a Committee to be formed to enquire into and report on "Roup and other Poultry Diseases," etc. . . . . .

That is good reading, for it shows that we are all united in thinking that this is the psychological moment to make a move.

May I give a reason or two why I think an official enquiry would be more valuable than that apparently suggested.

(1) From considerable experience of technical enquiries, I have learned that the value of a Committee of Enquiry depends, not so much on their personal profound knowledge of the subject under enquiry (provided some of the members are experts) as on their ability to enquire. This applies with very particular force to the President or Chairman.

The Ministry of Agriculture has a very much wider choice of personnel, and is much more familiar with the conduct of enquiries than any private association, however comprehensive, can be.. They would naturally and gladly seek the full support, advice and co-operation of the National Poultry Council.

(2) To suggest an enquiry extending to "other poultry diseases," is, I fear, to confuse the issue, and almost to ensure lack of useful results, as the field of enquiry would be altogether too extensive for any one committee to cope with in any reasonable time (I am tempted to think within any reasonable expectation of human life), and, if attempted, the work could not be sufficiently thorough to command unquestioned authority.

(3) If a successful enquiry was carried out into Roup we can be pretty sure that others would follow. One good thing at a time is sufficient for the day.

As an enquiry into Roup seems a possibility, let us have the very best enquiry by the very best enquirers obtainable.

It is as well that we should all be of the same mind, and I suggest that you, Sir, with your well-known literary ability, test the feeling of the Association on this matter, so that when the right moment comes, the S.P.B.A. may, through you, speak with one voice, and that no uncertain one.

Yours faithfully,
A. G. TIPPET.

THE SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

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AVERAGE EGG PRICES.

A member near Southport has written asking if I could find out for him from members resident in the district, the average egg prices in the following markets :—Ormskirk, Garstang, Preston.

If anyone could pass on this information I should be glad to receive it.

GLAMORGAN AGRICULTURAL COMMITTEE.

COUNTY EGG-LAYING TRIALS, 1924-25.

Report for 9th month—From 19th Oct., 1924, to 22nd Aug., 1925.

Light Breeds.—J. Joshua, Tondu (W.L.), 427; R. J. Evans, Abertridwr (W.L.), 406; Howell & Phillips, Barry (W.L.), 354; Mrs. E. H. Parry, Llantwit Major (W.L.), 301; H. Hopkins, Port Talbot (W.L.), 358; D. A. Hann, Pengam (W.L.), 306.

Heavy Breeds.—J. Joshua, Tondu (R.I.R.), 582; R. J. Evans, Abertridwr (R.I.R.), 549; A. Evans, Barry (R.I.R.), 496; Harrop-Griffiths & Hall, Bridgend (R.I.R.), 448; J. R. Thomas, Barry (R.I.R.), 418; J. H. Williams, Pontardulais (W.W.), 484.

During the 9th monthly period Dry Mash birds laid: 1st grade, 902; 2nd grade, 337; underweight and not scored, 29. Wet Mash birds laid: 1st grade, 717; 2nd grade, 342; underweight and not scored, 26.

C. F. DUNKLEY, Manager.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, JULY 10th. 1925.

GRAIN. AND FEEDING STUFFS.—English wheat is rather more inquired for at London, where steadier prices ruled at the close, but elsewhere quotations continue to decline slowly, and the average rate this week is barely 11s. 10d. per cwt. Imported wheats are again easier all round. Last week's prices are about held for both English and imported barleys, but little trade is reported. English oats command late rates, good samples of "whites" being very scarce. Imported oats move slowly, and some descriptions make rather less money. Stocks of old crop maize are about cleared; new crop Argentine sells at a slight reduction, but, with more inquiry, Bessarabian has advanced 1s. per quarter at Hull.

Trade for millers' offals shows a little improvement and quotations are the turn against buyers in some cases. Meals have fluctuated, but generally the tendency is towards lower rates, the demand being fairly quiet. Oil cakes remain an inactive trade.

MILLERS' OFFALS.—Bran (British): Bristol, £7 17s; Hull, £6 2s; Liverpool, £6 15s; London, £6 10s. Broad Bran: Bristol, £9 7s; Hull, £7 2s; London, £8 5s. Middlings—Fine (Imported): London, £9 2s; Coarse (British): Bristol, £9; Hull, £8 5s; Liverpool, £8; London, £7 10s. Pollards (Imported): Bristol, £7 17s; Hull, £7; Liverpool, £7; London, £7. Rice Bran: Bristol, £7 17s; Liverpool, £7 5s; London, £7 15s. MEAL.—Barley Meal: Bristol, £11 17s; Hull, £11 10s; London, £12. Maize Meal: Bristol, £12 2s; Hull, £10 10s; Liverpool, £10 15s; London, £11 10s. Maize Meal (S. African): Bristol, £10 10s; Hull, £9 5s; Liverpool, £9 5s; London, £9 2s. Maize Germ Meal: Bristol, £10 15s; Hull, £9 10s; London, £9. Maize Gluten Feed: Bristol, £11; London, £10. Locust Bean Meal: Bristol, £9 15s; Hull, £9 10s; Liverpool, £9 10s; London, £9 15s. Bean Meal: Bristol, £13 15s; Hull, £11 13s; London, £13. Fish Meal: Bristol, £20 10s; Hull, £19; Liverpool, £18 10s; London, £19 10s.

EGGS AND DEAD POULTRY.

Supplies of eggs, although light, are generally sufficient for requirements, trade ruling rather slow at the increased quotations. A scarcity of first-class English eggs is reported at London, where high prices are realised.

Week-end Prices—Eggs (per 120): British, 16s 0d, 13s 6d; Irish, 15s 3d, 14s 0d; Danish, 16s 9d, 16s 3d; Dutch, 16s 9d, 15s 9d; French, 14s 9d, 14s 0d; Belgian, 15s 6d, 14s 0d; Lithuanian, 12s 9d, 11s 6d; Russian, 11s 3d, 9s 9d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 10d, 1s 5d; Irish, 1s 5d, 1s 1d; Others, 1s 8d, 1s 3d. Ducks, 1s 5d, 1s 3d. Geese, 1s 1d, 11d.

EGGS..

Per Doz.—Ashford: First, 2s 0d; Second, 1s 11d. Birmingham: First, 1s 6½d; Second, 1s 5½d. Bridgwater: First, 2s 1d; Second, 2s 0d. Chelmsford: First, 1s 9½d; Second, 1s 8½d. Colchester, First, 2s 0d; Second, 1s 7¾d. Doncaster: First, 1s 10d; Second, 1s 9d. Dorchester: First, 1s 10d; Second, 1s 8d. Exeter: First, 1s 6d. Hereford: First, 1s 6d. King's Lynn: First, 1s 9d; Second, 1s 7d. Llandilo: First, 1s 4d. Mold: First, 1s 7d; Second, 1s 6d. Montgomery: First, 1s 5d. Newport (Mon.): First, 1s 6d; Second, 1s 5d. Norwich: First, 1s 10d. Oswestry: First, 1s 7d; Second, 1s 6d. Penzance: First, 1s 5d; Second, 1s 4d. Saffron Walden: First, 2s 1¼d; Second, 1s 8½d. St. Ives (Hunts): First, 1s 9½d; Second, 1s 8½d. Salisbury: First, 1s 9½d; Second, 1s 8½d. Skipton: First, 1s 5d. Truro: First, 1s 4d; Second, 1s 3d. Welshpool: First, 1s 8d; Second, 1s 7d. *Carlisle: First, 1s 7d. *Derby: First, 1s 8d. *Ipswich: First, 1s 9d; Second, 1s 6d. *Lincoln: First, 1s 8d. *Shrewsbury: First, 1s 8d; Second, 1s 7d. *York: First, 1s 10d; Second, 1s 9d.

FOWLS.

Per lb.—Birmingham: First, 1s 7d; Second, 9d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 6d. Hereford: First, 1s 6d. Llandilo: First, 2s 2d; Second, 2s 0d. Newport (Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 5d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 2s 0d; Second, 1s 10d. *Lincoln: First, †5s 6d; Second, †4s 0d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: First, †5s 6d; Second, †4s 6d.

DUCKS.

Per lb.—Birmingham: First, 1s 6d; Second, 1s 4d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 5d. Hereford: First, 1s 4d. Llandilo: First, 2s 2d; Second, 2s 0d. *Derby: First, †5s 0d; Second, †4s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, July 15th, 1925.

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Contributions.—The Editor will always be pleased to conside contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence o "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for si months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, Th Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches Rudgwick, Sussex.

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Classified Advertisement Rates will be found at top of first pag of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it i imperative that new advertisements and alterations are receive by FIRST POST ON FRIDAY MORNING to ensure insertion in th following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for every one concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

25, Woodland Road, Barry Dock, Glam.

Dear Sir,—I am only a backyarder, yet I may say I have learnt already quite a lot from its columns, and am bringing your paper before my fellow-members of the Barry Fur and Feather Society at our next meeting. With anticipatory thanks.

Yours faithfully,

(Signed) F. CURLE.

636.505
EG

Wednesday, July 22nd, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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Vol. XII. No. 4. Copyright.

Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months " " 6/4
Three Months " " 3/3

Buttercup.

White Runner Duck, No. 401, in Small Flock in National Test, 1923-24, has laid 267 eggs in 267 days, from Oct. 2nd, 1924, to June 12th, 1925.

"Daisy," Champion W.R., laid 300 eggs in 366 days in N.T., 1921-1922. 511 eggs in 2 years.

STOCK BIRDS.

ANCONAS,
LIGHT SUSSEX,
WHITE WYANDOTTES,
WHITE LEGHORNS,
RHODE ISLAND REDS.

Pullets and Cockerels, 1925.

(DAISY.)

Duke of Wellington.

Fawn and White Runner. Dam Lady Knight laid 363 eggs in 365 days in New Zealand Test. Daughter laid 294 eggs in 11 months in National Test, 1923-24. Grand-daughters won "Feathered World" Breed Cup, L. and N.E. Rly. Cup, U.D.C. Cup, Gold and Silver Medals, and First Prize Birmingham; "Daily Mail" Silver Cup in National Test, 1923-24.

Pens of 5 Ducks, 1924, and a Drake, 1925, can now be ordered.

Stock Drakes & Ducks

from **10/6—63/-** each.

UNSOLICITED TESTIMONIALS.—Ducks and Drakes.

Pitmore Poultry Farm,
Worplesdon, Surrey.
21st Feb., 1925.

Dear Sir,
The drake arrived in splendid condition. I am very pleased with him. Many thanks for sending such a fine bird.
Yours truly, JOHN M. WARDE.

Ash Tree Farm, Shelf, Halifax.
July 1st, 1925.

Dear Sir,
Allow me to thank you for the sitting of ducks' eggs you sent me. Also for the very kind way you have dealt with me.
Yours, H. CROSSBY.

Benenden School, Kent.

Dear Sir,
The ducks are laying splendidly. Please send your Mating List for 1925.
M. WHYTE.

71, Church Street, Standish.
3rd Feb., 1925.

Dear Sir,
I received drake to-day quite all right, and am very well pleased with him.
Yours, A. AUSTELL.

Sherborne, Warwick.
27th Feb., 1924.

Dear Sir,
The drake arrived quite safely. I like him very much.
R. E. NEGUS.

R. H. BERNEY, M.A., Cantab., **WEST COMMON, HARPENDEN, HERTS.**

PUPILS TRAINED.

PRIEST
AND
SHAW

UNDER ROYAL PATRONAGE
I O W
ALWAYS WINTER EGGS

Sandown,
I.W.

Why You should buy Our Pullets

WYANDOTTES. LEGHORNS.

BECAUSE

These birds are early hatched, and lay when eggs are scarce and dear.

Only strong, healthy birds, selected for laying qualities, are sent out.

The birds are reared under ideal conditions, and fed the best foods, so are fitted for any climate.

It is our business to save you the cost and trouble of rearing, and send you the goods ready for work.

WRITE FOR OUR 1925 PRICE LIST.

Compelling Reasons Why

You Must introduce the "Heydown" Strains on to your Farm

The day has passed when breeding stock was chosen on the strength of high records alone. High fecundity without stamina can only make for retrogression.

Nowadays, the discerning buyer demands a satisfactory answer to the following vital questions before making his choice:—

1. **Are the parent birds blood-tested and proved non-carriers of disease?**
2. **Are they from progeny-tested and individually-recorded stock?**
3. **Is the price one which allows of a reasonable profit?**

It is because the "Heydown" strains comply with all these demands that they are to be found on many hundreds of active money-making establishments throughout the British Isles.

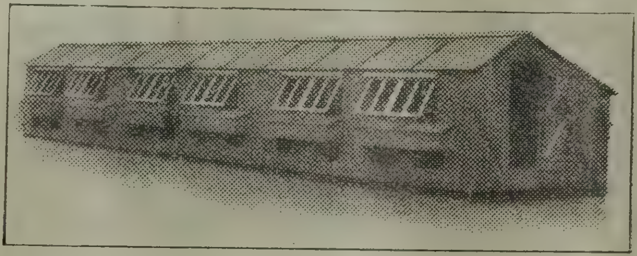
John H Dowden & Son were the pioneer large breeders to blood-test the whole of their breeding stock. They trap-nest 2,000 pullets and hens throughout the year. It is this combination of fecundity with stamina which helps to make the "Heydown" strains Pre-eminent.

We now offer 1924 hens, three months old pullets and individually recorded cockerels in our five varieties:— W.L., W.W., R.I.R., B.L., & L.S.

JOHN H. DOWDEN & SON,
Heydown - Heathfield - Sussex.

COMPARE THESE PRICES.

The "ROYAL" Laying House, as supplied to
H.R.H. THE PRINCE OF WALES.



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Semi-span roof as illustrated; outside nest boxes with felted tops, Floor Lights in back and front, as shown. Complete in every detail.

Sizes and Prices, including Floors, Roofs Felted and Treated Preservative.

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2.—20ft. x 10ft. x 7ft. 6ins.	... ...	30	10	0
3.—30ft. x 10ft. x 7ft. 6ins.	... ...	42	10	0
4.—40ft. x 10ft. x 7ft. 6ins.	... ...	54	10	0
5.—50ft. x 10ft. x 7ft. 6ins.	... ...	65	0	0

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25 year's experience, combined with specialised production facilities, ensure that Poultry Houses built by "PHIPPS" are absolutely without equal.

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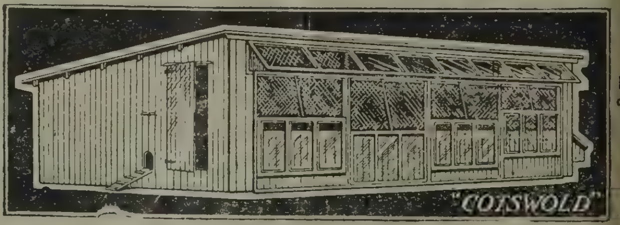

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association
WEDNESDAY, JULY 22nd, 1925.

Editorial.

FROM S. AFRICA.

We have received the following letter from Mr. J. /. Pollard, writing from Uitenhage:—

"There is to-day a big opening for experiment. You cannot urself, or any single individual, undertake this, but we can l share. In the breeding of poultry there are many factors. We eed to eliminate or fix them, as the case may be. The comercial egg farmer aims at increased production. The question , first you breed within a strain, sire and dam pedigreed from yers—you expect the offspring to be good layers, with little riation. Secondly, you breed within the breed, but from diffent strains—sire and dam pedigreed from layers. Are you right expecting equal laying in the offspring, as in the first instance, d with as little variation in type, in size, in size of egg, etc. Will at factor vary any more than in the first instance? Thirdly, u breed a first-cross sire s dam, pedigreed from layers as in e first and second examples. The variation becomes greater—pe, colour, everything—but will not the egg factor remain? urthly, can we carry this one step further, and by mating a digreed male to a pedigreed first-cross, still be sure of the egg ctor? Can this not be tested? Tests have been made in nerica—pedigree males mated to ordinary farm stock—the offring again mated to pedigree males, with the improvement in e egg yield all along the line. Why then should any retrogade ep be found in the way I suggest? It is not reversing the ocess, because male and female are pedigreed for egg proction.

A couple of subjects came up in a recent number of Eggs" that perhaps South African experience may throw some ht upon. First: Toe-picking. You are inclined to believe this due to the bright weather. We have brilliant sunshiny days, en front chicken houses, but toe-picking is unknown—practilly all yellow leg breeds. Is it not possible that it is due to owded quarters When I was last in England I went through me large poultry farms. You have to keep the chickens warm. e give them plenty of space to run about, the sun keeps em warm

Secondly: Altitude and Incubation. Until two years ago I cubated at an altitude of 3,500 feet. The chicks nearly always tched on the 20th day. I don't think altitude has anything to with the time the chicks hatch. Although our seasons are st the reverse of yours, we have already several batches of chicks uivalent to hatching in October and November with you. These ry early chicks thrive."

Mr Pollard is correct in saying that no single dividual can undertake the experimental work concted with these breeding problems. He is certainly ht when he says we can all take a share in the rk. We hope that in the near future the S.P.B.A. ll be in a position to make some experiments in the rection he indicates.

His letter is interesting. This question of variation the big problem of the breeder, and for generations has generally been accepted that the only means of eventing wide variation was to breed in line. It is, however, not always understood that selection for the desired characters must precede line-breeding, and that before "breeding in" is attempted, there must be "breeding out," i.e., the elimination of undesirable characters. This can only be acomplished by selection. When we speak of line-breeding to "fix" a character, we really mean that we line-breed in order to prevent, as far as possible, the introduction of other characters which may be dominant to those for which selection has been made. If we mate two individuals from the same family or strain which have been continuously selected for certain characters to the exclusion of others, then necessarily the variation will be comparatively small, but we have to remember the individual carries all the characters of his race, and however careful our selection may have been, these are likely to appear in a percentage of the progeny.

We have now to deal with Mr. Pollard's second question. If we breed within the breed, but from different strains—sire and dam pedigreed—can we expect equal laying in the offspring, as when breeding within the strain. In answering this one has to be careful. There is good reason to believe that this would be the case. We can expect equal laying in the offspring, but it would be a great mistake to say definitely that it would be so. We are, of course, assuming that selection has been for the same specific purpose. That the characters for which selection has been made are dominant on both sides. We could not expect equal laying if the mating was pedigreed Utility Buff Orpingtons and Pedigreed Exhibition Buff Orpington, although it would be "within the breed."

In our opinion if you breed within the breed, the egg factor will remain, provided always selection is made for high fecundity. Whether we can carry this further by mating a pedigree male to pedigree first-cross females, and to be still sure of the egg factor, it is impossible at present to say. Certainly it could be tested.

Again, if we are dealing with really highly fecund stock, which has been selected for generations, we are of opinion that the egg factor will remain, and that there will not be the wide variation which we have been taught to believe.

It is practically admitted that as far as variation is concerned, we have generalised too much. It is hard to discover a reason, where selection has been made for a long period for a specific factor, why the mere fact of crossing with another variety which has also been selected for the same factor would result in great variation or in reversion, but the test must be made.

Mr. Pollard remarks that tests have been made in America. Pedigree males mated to ordinary farm stock, and the offspring again mated to pedigree males, with improvement in the egg yield all along the line. If he will forgive our saying so, we do not think this has much bearing on the question. Improvement would necessarily follow along the line, because we begin at a very low standard. We are at the present moment discussing highly fecund stock, where both male and female are pedigreed for egg production. The question is whether this cross will tend to reversion, and it is acknowledged that when we cross there is a tendency in this direction, or whether, because of the continuous selection for high fecundity, this character has become fixed, and is not affected by the crossing.

We are bound to get variation in type and in size. Whether we should get it in size of egg would depend upon the pedigree of the selected birds.

We know enough now to be certain that the mere mating of two large egg strain birds does not suffice to secure all large eggs in the progeny.

It is possible the mating of two different strains of Wyandottes selected for large eggs might result in reversion to the small eggs to some extent, but these are all matters which need investigation. What Mr. Pollard has to say on the question of toe-picking is of great interest. It is possible, as he says, that the birds are not in crowded quarters. In California, also a land of bright sunshine, toe-picking assumed serious dimensions until the plan was hit upon of blue-washing the brooder houses.

Finally, Mr. Pollard disposes of the suggestion that eggs incubated at a high altitude take longer to hatch than those at a comparatively low one.

LANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES' LAYING COMPETITION.

Held at the Lancashire COUNTY COUNCIL FARM, Hutton, under the supervision of Mr. C. H. Dobbin, the County Poultry Instructor.

The following birds have laid 190 eggs or over to date:—W.L., No. 1, 27, 39; W.W. No. 37, W.L. 57 and 92 have never laid an egg, but 92 visits the nest nearly every day and shows all signs of a good layer. This bird has been credited with an egg that was broken, but apparently she never laid it. R.I.R. No. 69 laid over 30 eggs in the early stages, but although she visits the nest frequently never lays. The health of the birds are better, only one case of roup during the month. Several birds broody during month.

NINTH MONTH'S REPORT—28th May to June 24th, 1925.

The following are the leading positions in each section, showing number of eggs and points for the nine months:—

Section 1.—White Leghorns—Large Breeders (3 birds).—R. Beeseley, 516, 2859; E. Cam, 500, 2840; J. Booth, 523, 2812; A. C. Harrison, 479, 2619½; W. Hamnett, 446, 2569½; R. Moon and Sons, 463, 2386.

Section 2.—A.O.V. Light Breeds—Large Breeders (3 birds).—O. Rawlinson, 500, 2563; Mrs. J. H. Hill, 348, 1749; J. D. Willacy, 328, 1619; F. Lord, 341, 1565½; H. Hilton, 308, 1477; W. Hamnett (1 dead), 279, 1467.

Section 3.—White Wyandottes—Large Breeders (3 birds).—C. Bates, 484, 2780; J. R. Dawson, 419, 2395; Mrs. S. Sefton, 449, 2347; W. Hamnett, 407, 2328; P. Williamson (2 dead), 365, 2220; F. Holden, 411, 2218.

Section 4.—A.O.V. Heavy Breeds—Large Breeders (3 birds).—F. Harvey, 514, 2575; W. Weardon and Sons, 450, 2439; T. Edmundson, 407, 2267; A. T. Walker, 402, 2225; T. Braithwaite, 379, 2199; G. Cobham, 428, 2120.

Section 1.—Light Breeds—Small Breeders (single birds).—W. Fletcher, 166, 915; J. Stanley, 150, 905; F. Wilkinson, 189, 891½; W. Ashton, 157, 889; G. A. Wolstenholme, 154, 861; H. West, 155, 850.

Section 2.—Heavy Breeds—Small Breeders (single birds).—J. W. Pearson, 176, 1040; D. Braithwaite, 154, 796; H. Harrison, 146, 745; W. Robinson, 128, 742; A. D Walton, 151, 730; Mrs. J. A. Mellor, 135, 669.

Modern Poultry Feeding.

By TOM NEWMAN.

I have received the following letter from Mr. J Miglioretti, which I am sure will be of interest t my readers. To the value of milk I have re peatedly drawn attention in these columns for number of years :—

"Dear Sir,—Perhaps you will allow me to tender you m most sincere thanks for the pleasure and profit derived fro reading your admirable publication "Eggs," and while I a not a member of the S.P.B.A. I should certainly consider it privilege if a 'foreigner' (though all the same a Britis producer) were allowed to voice a conviction with regard t time and milk as valuable requisites to the successful rearin of chicks.

My methods in this direction have been to:—

(1) Freely sprinkling **fresh powdered lime** in soft, dee litter, renewing litter as frequently as necessary.

(2) Giving the chicks **no water at all** for the first si weeks, and allowing them plenty (ad lib.) goats' mil instead.

I have thus only had three cases of leg weakness out 1,700 chicks in a twelvemonth, and these were due to t litter getting wet, and it escaping my notice. I entirely agr with Mr. Somerville, but do not think that **goats'** milk w cause bowel trouble unless the goats were very foolishly fed cake.

It may further interest you that Leghorn cockerels picked 17 days to 24 days old and given nothing but goats' milk ten weeks old, scaled, when finished, at **11 weeks old, 3 lb each.** I have plenty of witnesses to prove this statemen Thus the early Leghorns are very paying propositions. Thr or four good goats are an absolute necessity to the one-ma poultry farmer who wants to study £ s. d. of poultry farmi for a living (table birds, stock birds, etc.).

Another point in favour of goats' milk is that the sto thus reared will not be subject to chills and the consequenc thereof nearly so easily if only a little cod liver oil we administered at three weeks old and again at six weeks."

Yours faithfully,
J. MIGLIORETTI.

I am a little surprised that Mr. Migliore should find it necessary to give cod liver oil addition to the goats' milk, assuming the latt to be full milk and not skimmed or diluted in a way. The milk should be rich in the vitamin and of, course, its lime content would be sufficie for all purposes, especially as the chicks are giv it ad. lib.

In the second lot of the Wellingham experiment where dried buttermilk was used, not the slighte trouble was experienced with leg weakness, a no cod liver oil was used there. However, must be conceded that the cod liver oil appears be the real specific for leg weakness. Wheth we can find something which would be equa effective and less troublesome to give remains be seen. At any rate, as it appears likely the will be some demand for it by poultry-keepers, is time that we were on the look out for efficient substitute, for, of a certainty, with increased demand would come the increase in pr which may some day be prohibitive.

FISH MEAL.

Complaints continue to arrive as to birds turnng purple in the comb, decreased egg production, and diarrhoea. Many of these have been traced to the use of fish meal of inferior quality. I think readers should pay a little more attention to this matter, and if they cannot buy on a guaranteed analysis, at least they could take the precaution to see that these meals do not contain an excess of oil, which is generally the cause of the symptoms given above.

As a rule these inferior fish meals are a dark chocolate colour. If laid on a sheet of paper it quickly becomes oily, the smell is far more noticeable than in a really good sample. There is a tremendous lot of fish meal on the market which is only suitable for manural purposes, and we shall have to induce the National Poultry Council to take action in this and other matters to prevent its sale.

Complaints have been rather numerous this year, and one always notices that as the price of foodstuffs rise there is a great increase of inferior samples placed on the market. We experience that not only with fish meals, but also with maize by-products, with dried milk and many other poultry foods.

DRY MASH FEEDING.

I have received the following question from one of our readers :—

> "A poultry expert at a certain show told me that if you feed dry mash for over five years your birds deteriorate in size—is this true?"

I do not know who the expert was at this particular show, all I can say is that he was talking absolute nonsense. I have fed dry mash for over eight years, and know scores of others who have done so, and there has been no deterioration in size of the birds.

People who make these absurd statements should at least be able to substantiate them. The deterioration of the size of any flock of birds would not result from feeding dry mash. It is far more likely to occur through selective breeding for high records. I can show this same expert dozens of farms where there has been steady deterioration in the size of the birds for years, in spite of the fact that they have been fed on wet mash.

On the face of it, the statement is absurd, and I very much wonder what evidence the said expert could produce to prove his assertion, and whether, if he has observed any deterioration in size of any flock which has been fed on dry mash for five years, he has fully taken into consideration all the circumstances which might have contributed to it?

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

THE FOOD SCHEME.

It is a little astonishing, after all that has been written in these columns on the above subject, to get a query, asking whether the writer understands that he can get five cwt. of the Breeders' Layers' Growing, or the Chicken Mash through the S.P.B.A. at the two-ton rate.

We have stated this so explicitly in previous issues—five cwt. of any one of the above mashes can be obtained at the two-ton rate.

This has been found to be a great advantage to many of our members, and the demand for these mashes is increasing.

We are in a position to put these mashes on rail at a price 50 per cent. lower than that of the average proprietary mash which is advertised, and we claim that the ingredients used in these mashes are first-class, and that they will give results equal to those of any proprietary food advertised at double the cost.

Prices of the mashes can be obtained by sending a card to these offices. Prices vary slightly according to the market fluctuations.

PLUCKING.

I take the following account of plucking a fowl in record time, from the "American Poultry Journal." Our Sussex fatteners would not follow this method, because they say the dipping would spoil the appearance of the flesh, and the most expert of them find their method rapid enough for their purpose. The article refers to a Mr. Haussen, who claims to be able to pluck a fowl in record time :—

"He has found the temperature of the water for scalding is of great importance. It should be 160 to 170 degrees Fahr. for young birds, and 20 degrees higher for old ones. The bird is taken by the legs, and immersed head first in the scalding water. It is then drawn out and dipped again completely under. The feathers close in upon the flesh at the first immersion, but spread when the bird is lifted out, thus allowing the water to reach the flesh after the second immersion. The bird is next held under the water until, by test, the wing feathers are found to come out easily. After a shake or two to cool it, the bird is ready for plucking.

With the bird lying on its left side, and its feet pointing under his left elbow, Mr Haussen steadies it with his left hand on the body, grasps with palm upwards, and thumb round its base, the right wing. With just the right pressure and one upward pull the wing is stripped clean.

For the second movement the bird is shifted so that the legs point to the operator's right, and the back is towards him. The left hand, with the thumb at the back and fingers under the wing, holds the bird. The grasping right hand, beginning with the flattened palm, takes the feathers from the right breast and side, and closes round the leg with a motion that denudes it.

Changing his position so that its legs point to the farther left corner of the table, the left hand then rests upon the plucked wing. The right hand begins by stroking the feathers from between the legs, grasps the tail, breaking it up over the back, to a point between the wings. This stroke is the most difficult, and requires the most practice.

He next turns the bird over so that the legs are on the right, and the breast is towards him. Then, holding the base of the neck with his left hand, he strips the left wing just as he did the right. After swinging the bird's head a little towards him Mr. Haussen, for the fifth stroke, grasps with his left hand the left wing. His right hand, palm down, strips breast and side, and closes round the left leg, taking all the feathers with it.

The final stroke is accomplished after turning the bird's legs towards the left, with breast towards him, and grasping the body with the left hand resting on the wing. The right hand begins its stroke between the wings, and closes round the neck, taking the feathers with it."

UTILITY AND EXHIBITION.

"In what the English breeder does well, he does without a peer."
(American Poultry Journal).

Reading the account of a Poultry Conference held at Reading 25 years ago, I note that the same charges are being made against the exhibition breeder to-day as were made then. At that time breeding for heavy egg production was little practised and less understood, and the culls of the fanciers' flock were the "utility" fowls of the day. He could not retort, as he does now, that utilitarians were breeding bantams, had no regard for colour or type, and had to come to him because of the lack of stamina in our stock. He had little to say in reply to these charges, but claimed that he was doing everything possible to improve the breeds. I note there is a tendency to revive the controversy between the fancier and utilitarian; mainly I think by some members of the Poultry Club, who resent its utility committee. What possible good can all this do? The constant repetition is wearisome; there will always be the two sides of the industry, and no amount of argument will bring them together. If we both recognised our mistakes, and endeavoured to rectify them, we should effect something. The trouble is that we breed for extremes instead of for perfection, and while we continue on these lines we shall not effect much in the way of breed improvement, whether we breed for feather or eggs. It is pleasing to be able to say that many of our utility breeders have recognised the folly of breeding for extremes, and there is a marked improvement in the stock. As our contemporary says, when we do well we do without a peer; the pity of it is that we most of us prefer to breed monstrosities.

LANGDON LAYING TEST (JUNE).

Section 1.—Light Breed (5 pullets).—F. Freeborn (W.L.), 778 eggs; H. J. Thomson (W.L.), 751; T. Miller (W.L.), 681. Monthly Certificate, H. J. Thomson.

Section 2.—Heavy Breed (5 pullets).—E. V. Bazin (R.I.R.), 677 eggs; H. J. Thomson (R.I.R.), 648; W. Belsham (R.I.R.), 633. Monthly Certificate, H. E. Bragg.

Section 3.—Light Breed (single bird).—W. Dillenz (W.L.), 180 eggs; E. P. F. Anglian (W.L.), 174; Miss N. M. Grubbe (W.L.), 180. Monthly Certificate, Miss N. M. Grubbe.

Section 4.—Heavy Breed (single bird).—H. Jones (R.I.R.), 174 eggs; H. Bush (W.L.), 179; F. Freeborn (R.I.R.), 159. Monthly Certificate, H. Bush.

Section 5.—Any Breed (gift).—W. Dillenz (W.L.), 182 eggs; E. V. Bazin (W.L.), 153; H. Maycock (W.W.), 136. Monthly Certificate, W. Dillenz.

First-class certificate for highest scoring pullet for month, H. J. Thomson, 26 eggs, value 3/9½.

Angora Rabbit Wool Farming.—VI.

By the **LADY RACHEL BYNG.**

FEEDING.

One of the so-called "secrets" of successful Angora Rabbit Wool Farming lies in the judicious feeding of the animals. By "judicious feeding" is meant, not only the ingredients of which the meals are composed, but also the amount, and the manner in which it is fed.

During the first three weeks of its life the baby Angora receives its nourishment through the mother. Care must be taken, therefore, to feed nourishing and wholesome food to the doe. As much green food as possible is necessary as a laxative to avoid having to dose her with aperients, for the latter may have the effect of scouring the litter. Green food is an excellent milk producer, especially plaintain, sow thistle, and groundsel.

FANCY THAT.—Three months old, April, 1924.

Should a doe be inclined to be constipated feed dandelions. Should she be inclined for diarrhoea, feed shepherd's purse. It is a wonderful deterrent, and much appreciated by rabbits. But dandelions and shepherd's purse do not grow all the year round. When they are unobtainable give, instead of dandelions, half a teaspoonful of medicinal paraffin. In the place of shepherd's purse, give half a teaspoonful of raw arrowroot in a teaspoonful of cold water.

If you are sure the doe will drink up the milk this can be stirred with the milk, but if she is an uncertain feeder it must be administered with a spoon at the side of her mouth. Bread and milk should be fed twice daily to a nursing doe, until the babies are weaned at seven or eight weeks of age, and this food should be continued to the babies after weaning.

Some babies are troublesome about drinking milk after they leave the doe. This is especially the case if she herself has had plenty of milk to give them. But it is usually easy to teach them to drink it, either by feeding for a few days with a spoon or by dipping their noses into the milk.

As soon as the babies leave the nest the utmost care is needed in feeding only sufficient food that can be eaten at one meal. These rules should be borne in mind :—

(1) Feed unlimited clover hay in a rack—not loosely on the floor where the babies will sit on it and dirty it.

(2) Be certain all dishes are scrupulously clean.

(3) Remove all dishes in which mash or bread and milk is fed half an hour after feeding, otherwise the babies will probably sit in them, dirty the food, and then eat it. The result will probably be sudden death by diarrhoea.

(4) Remove all uneaten green food for the same reason.

(5) Clean out their litter at least three times a week, or they will nibble dirty straw with the same disastrous result.

Some rabbit breeders feed the does away from the young for fear of their eating unsuitable food. If one is careful not to feed coarse green stalks, no bad results ensue from the babies sharing the doe's meals.

When the babies are weaned they should, in addition to their bread and milk, have a plentiful supply of clover hay, fresh water, and greens, when obtainable. In winter time very thin slices of roots can be fed. Half to one ounce of mixed wheat and oats should be fed daily. They love crusts, toast, etc., to nibble.

When they are three months old the milk diet can be gradually dropped if milk is scarce, but it should be borne in mind that milk is a wonderful wool producer. Cows' and goats' milk should be diluted with boiling water.

Any of the good brands of milk powders form a good substitute.

After three months to six months of age the rabbits' diet gradually becomes that of the adult, i.e.:—

6 to 8 ozs. clover hay daily.
8 to 12 ozs. green food.
1 to 2 ozs. wheat and oats.
Unlimited fresh water.

In the winter, in addition to the above, a warm **crumbly** mash (not wet) can be fed of the following, by weight :—

6 parts bran.
6 parts middlings or sharps.
3 parts Sussex ground oats.
2½% Bycol fish meal.

Mixed with really hot water—one large tablespoonful to each adult.

The Lady Rachel Byng will be pleased to answer any question if stamped addressed envelope is enclosed.

A Belated Reply to Criticism and some Further Views on Commercial Egg Farming.

By LESTER SPURGEON.

(*Continued*).

Mr. Newman has referred to my statement respecting the views of an American, who, after studying our markets here—all that could in any way affect the industry—came to the conclusion that he saw greater possibilities for poultry and egg farming in England than in either the United States or Canada, in which countries he had had experience. I mention his views since some appeared to be most sensible.

It must be conceded that our produce disposal markets are good, or there would not be that exportation of eggs and poultry from the two countries referred to; countries which make a speciality of egg and poultry flesh production. I suppose it is common knowledge that the reason so many other countries can export their produce to England, enabling it to be sold for less than home production is that it is produced by the peasants and small farmers, and in small quantities by people who make no capital outlay for this branch, but by the country's excellent organisation and co-operative methods of collection and packing, the produce can be sent out speedily in a very marketable manner. It is, therefore, food for thought when we remember eggs and poultry are coming into England from two or more countries whose producers are securing a living out of such production solely.

I recall what we were told by our own Poultry Commissioner, Mr. Percy Francis, who visited both America and Canada last year, and who had opportunity of studying some of the conditions of the industry in those countries. His impression was that labour, feed, and the disposal markets were in no way more favourable that ours, if as good, and yet he saw numbers of men supporting families in what appeared comfortable homes solely by the production of poultry and eggs. So that you see in these two countries alone, to say nothing of our Colonies in the Antipodes, it is possible for men to risk their capital, and no small capital at that, as a means of securing a living out of the production of poultry flesh and eggs, and in these countries, where the basic costings are no more favourable, if as good, as our own. And, remember, they go to the extent of producing so much that it has to be marketed here in England, a country that is admirably suited in every way for such production!

From the American and Canadian poultry press that has come my way I have not yet seen discussed what we are for ever doing, namely, whether poultry production pays Egg and poultry farming is accepted as a paying proposition. Well, why is it?

I believe the American, to whom I have referred, gave one or two reasons. These are some:—First, he said, his plant equipment would not cost him what we are spending upon ours here in England, and he was appalled at the idea of commercial egg farmers thinking of purchasing ready-made laying houses, as we know some have done or are doing. Paying firms, who can afford to advertise their wares in the shape of simply-constructed buildings, in which to house hens. His idea was either to construct, or partly so, the laying and other sheds necessary, or to contract with local labour. Then he would undertake to construct his own mammoth incubator. That may sound a colossal task, but when one comes to think of it anyone with carpentering abilities, and with the knowledge of the essentials for incubation, could construct the wood work of such a machine.

Then another point was that the birds would be run much more intensively than here. This, of course, necessitates the careful selection of soil which would have to be of a porous nature, and although this would not be so conducive to the growth of herbage as soil of a heavier nature that would not need to be taken so much into consideration in view of the plans for feeding.

The birds were housed in 1,000 units, and I forget how many units he said he had had in his care. By a weekly inspection of the birds at night on the perch by the light of an electric torch, he was able to cull and pick out ailing birds, thus avoiding the risk of disease.

Then his final point was the reduction in cost of feeding for egg production. Fifty per cent. of the total food consumed would consist of pulped roots and kale, fed in wooden troughs daily. He said experiments had been carried out to his satisfaction, and that for egg production there was no food to touch it. The birds eat it with avidity, and we know its cost can be cheaper than grain and mash. Such a ration would not be suitable, of course, for the breeding stock.

I am convinced we do not pay sufficient attention to the production of vegetable food for our birds, and such ought to be a most important part of the work on the farm, or arrangements made for its regular supply. By pulping every bit of the vegetable is consumed.

Well, then, roughly condensed, this man's idea was to spend less on capital outlay than we do here, run more intensively on suitable ground, feed cheaper, and so arrange the housing of the birds that he, as owner, could undertake a large proportion of the work himself.

To a very large extent, no doubt, conditions obtaining in England are accountable for the questionable condition of Egg and Poultry Farming in this country. We are living at close quarters with each other, food is cheap, towns with their varying attractions are close together, and the man with capital has, as a rule, had some sort of public school education which teaches him many things, amongst which manual labour is carried out by the paid labourer. Very few of the farms I see are run by men who undertake much of the manual work. There is generally the manager or foreman, and it does not take any thinking person long to understand that with the free importation of food, such as we are interested in, there is not much scope for a big margin of profit to allow for much paid labour. These remarks apply to the commercial egg farmer, and not to the stock breeder or specialist, who creates business by advertising stock that can fetch enhanced prices, which would allow for special labour. The man who has to advertise his wares, run a staff to cope with the usual business routine of selling, is another story, but many of us, having come through some sort of business experience, entered this branch of work with the idea of cutting out much of that kind of thing.

(Continued at Foot of Next Column).

Anyway, it is pretty obvious that if men in other countries, not so well situated as our own in many respects, can make this branch of food production a paying proposition, there is something wrong with our system if we cannot do as well. That we are not doing so well is very clearly demonstrated to me by many letters I receive.

(To be Continued).

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

" BODIES " for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

E. M. L. (Selby). I do not believe that the "capacity" of the male is any indication of his breeding value, and as you ask for my reasons I will endeavour to give them you. When a hen is coming into production she begins to eat more, in order to accommodate this large quantity of food, the intestines must be elastic and large as compared with the time when she is eating less, and not laying. Careful measurements have shown that the intestines about double their dormant size during heavy production, but this is due to the stretching of the walls, and not to the increase of intestinal material. At the same time the ovary and oviduct are also increasing in size and weight. Thus we have reason for capacity in the hen, which we have not in the male. When I am writing of capacity here I am referring to the distance between the pelvic bones and the breast bone. As you ask how I would select a breeding male apart from his pedigree, the following may help you: I like to study him in the pen before I handle him. He should be fine in feather, as this shows little indica-ion to put on fat, and that is an inherited tendency. I would reject a white bird which was inclined to be yellow. He should be medium size with fine flat bone. Plenty of saddle hackle, a good head, with well-developed comb and wattles, as this indicates great activity of the sexual organs. (2) The sample of Sussex ground oats is of fair average quality—good value for the money.

"Grateful" (Castleford) writes:—"Would you kindly inform me through your valuable paper the following: I have some R.I. Red pullets, 13 months old, and have been feeding them on 2lbs. bran, 4lbs. sharps, 1½lbs. S.G.O., ½lb. maize meal, and ½lb. fish meal, and I want to know: (1) When to start feeding grain? (2) What kind? (3) How much to allow, and what time to feed? I do not quite understand what "Grateful" means. Surely he has not been rearing the chicks entirely on the mash without any grain feed at all? If so, they should have a grain feed at once made up of two parts good short plump white oats, and one of wheat. As to how much to allow, they should have as much as they will clear up in ten minutes. I cannot lay down a hard and fast rule as to quantity. Feeding is a matter of observation, and no one so quickly goes wrong as the man who feeds by weight and measure.

"Starter" (Launceston). You have made a very serious mistake in attempting to check egg production, because of your fear of the partial moult with your February hatched chicks. They will want some careful feeding to pull them round. Don't you know that all growing stock require to be on full feed if they are to reach healthy and vigorous maturity, and that an underfed chick means poor development and lowered resistance to disease? Your best plan will be to feed these birds as much food as they will consume, and for the present it would be advisable to add two per cent. cod liver oil to the mash. Replace one part of the bran with an equal quantity of Sussex ground oats, and give a heavy feed of grain at night. (2) If you mate a Black Leghorn male to Rhode Island Red hens, you will not be able to detect the sex of the chick at hatching.

D. L. (Bradfield) hatched some Wyandottes from an expensive sitting of eggs in January, now the yellow legs show a tendency to turn green, and he asks if the food could in any way have caused this, and what he can do to prevent it. It cannot be prevented, and it is not attributable to the food. The explanation is there is probably an excess of black pigment. He should remember the White Wyandotte was a sport from the Silver Laced. (2) If he breeds from the combless Leghorns, a big percentage of the progeny will exhibit the same defect.

S. A. (Gravesend) has been offered a wonderful recipe for egg production, the discovery of a German scientist; the price is 42s. per cwt., and 7lbs. of it added to one cwt. of mash will lead to a marked increase in egg production, and larger eggs. I heard of this first some four years ago; then it was the discovery of a South African farmer; next year it was a Canadian farmer, and now a German scientist. I have no doubt it will turn up next time as a Chinese discovery. How a little mystery does please us all. Better leave it alone, S. A.; science can help us a great deal, but there are many things it cannot do. (2) You would be unwise to use the White Leghorn cockerels next season, as you have no pedigree, only the flock average.

H. W. (Pickering). You must certainly not run the February hatched cockerel with the hens now. The fact that he is sexually so forward is not a sound reason for doing so. On the contrary, keep him away from them; he will develop much better. (2) The size of egg cannot be affected by feeding. An underfed pullet would lay a small egg, but assuming the feeding is so good as to keep the birds in good laying condition, no feeding would have a permanent effect on the size of egg, although if of too stimulating a nature, it might cause them to lay double-yolked eggs.

W. A. (Cambs). Chalk would not be an efficient substitute for oyster shell, as it contains only 56 per cent lime, and this would be insufficient. (2) The feeding is correct, and I am inclined to think that your birds are "stuck" because they are over-crowded—a very common fault—and one which causes serious loss. It would be advisable to put them on fresh ground, and reduce the number in the colony house to 25. Have they adequate perch accommodation? The sample of fish meal contains an excess of oil. It is unfit for poultry feeding. It is not wise to run turkeys and fowls together.

YORKSHIRE FEDERATION OF POULTRY SOCIETIES' INTERNATIONAL LAYING TEST, 1924-5.

Report for the Ninth Month—May 30th to June 26th, 1925.

The Management Committee report that the eggs laid during the ninth period of four weeks make an average of 17.5 per bird. There is much interest in the positions of the leading pens now that three-quarters of the test is over. Mrs. Clay holds premier position for the "Daily Dispatch" Gold Cup, with her White Leghorn Pen, 96. For the Silver Cup, now to be awarded to the second pen in Class A., there is keen competition, as R. H. Fryer's White Leghorn Pen 10 only has four birds in the running, but leads by 2/9½ to date, while Davey and Son's Light Sussex Pen 80 is only 4½d. in front of R. Rodwell's White Leghorn Pen 19, and they are respectively 3rd and 4th. The best individual bird in the competition for the "Miss Delaney" Silver Cup is Mrs. Clay's bird No. 559 with 207 eggs to her credit, though M. Hindmarsh's bird No. 375 is close behind with 205 eggs. Competitors can now estimate their positions for all the Silver Trophies to be awarded in this year's test.

The Schedule for the 1925-1926 Test is now in the printer's hands, and a copy will be sent to each competitor. It is hoped that entries will be sent in good time.

Through a clerical error in the seventh month, Bird No. 514 has been credited with 20 eggs too many. This mistake has been rectified.

Hon. Secretary:—Mrs. VOWLES, Beningbrough, York

Figures are Eggs and points to date respectively.

Class A. Section 1. White Leghorns.—Mrs. Clay, Long Preston, 889, 897; R. H. Fryers, Bradley, Keighley, 866, 877; R. Rodwell, Nelson, 858, 925

Class A. Section 2. Black Leghorns.—R. Rodwell, Nelson, 850, 852; A. White, Malpas, Cheshire, 789, 829; Mrs. Clay, Long Preston, 758, 804.

Class A. Section 4. White Wyandottes.—Dr. J. E. Helm, Newchurch, in Rossendale, 796, 812; Mrs. Clay, Long Preston, 747, 810; A. Snowdon, Pool, Leeds, 823, 831.

Class A. Section 5. Rhode Island Reds.—Sutton and Son, Little Hoole, Preston, 787, 850; M. A. Hindmarsh, Skelton, York, 699, 736; T. Gardner, Garstang, 648, 745.

Class A Section 6. Any Other Variety (Heavy).—Davey and Son, Sutton, Keighley (L.S.), 805, 864; Wright and Fortune, Keighley (Bf.Rk.), 726, 740; J. N. Readman, Howden (Bf.Rk.), 651, 682.

Class C. Section 9. Any Variety Light Breed. Single Bird Section.—Wm. Wharton, Keighley (W.L.), 181, 187; Mrs. E. Kaye, Poole, Leeds (W.L.), 180, 185; R. and A. Johnson, Chalford, Glouc. (W.L.), 175, 184.

Class C. Section 10. Any Variety Heavy Breed. Single Bird Section.—M. E. and A. Robinson, Bawtry (L.S.), 193, 206; Alf. Sawyer, Crosshills, Keighley (R.I.R.), 165, 188; H. Downsbrough, Denholme, Bradford (W.W.), 191, 200.

Correspondence.

PERMANGANATE OF POTASH.

Dear Sir,—In view of the fairly general use of potassium permanganate in drinking water the following statement by Blackham is interesting :—

> "It has been claimed that half grain to a gallon will sterilise water in one hour. Such statements are misleading, as the process of sterilisation being one of oxidation, the quantity of chemical used depends largely on the quantity of oxidigable organic matter present. The colour imparted is objectionable and the action feeble and uncertain."

In human hygiene the use of permanganate has been dropped except in connection with large scale work against Cholera.

The following method of treating water was used successfully during the Great War, and has practically replaced other methods of purification for military purposes :—Prepare a stock solution with 60 grains (one teaspoonful) of bleaching powder (chloride of lime) and two gallons of water. To each two gallons of water to be treated, add six ounces of the stock solution. If treated with sufficient stock solution the water will taste slightly chlorine. If the taste is absent it will only be missing in rather bad samples of water; then add a further 30 grains to the stock solution.

This solution should be well labelled, shaken before use, and made fresh daily. Only good quality fresh bleaching powder (B.P. 33 per cent. free chlorine) should be used. When fresh the powder should smell strongly of chlorine, and if it is not fresh then use double or treble the quantities stated.

If anyone wishes to be very exact, then the water so treated may be tested by the starch-iodide method (i.e., acidity or otherwise of the water).

Once the correct strength of stock solution has been ascertained, it will be found unnecessary to test any further.

Yours truly,
I. W. RHYS.

AUTUMN HATCHING.

Dear Sir,—I am a regular reader of "Eggs," and am very interested in the articles on "Autumn Hatching," which have appeared in your last numbers. I am only an amateur, keeping about 120 hens, but I thought it might interest you to hear my small experience on that subject.

On September 3rd, 1923, I set 54 eggs under hens, Leghorns, Light Sussex and R.I. Reds, and hatched 42, all of which I reared. I found them invaluable for killing in January, when poultry is scarce, but I thought I would keep some of the best pullets as an experiment. I chose seven Light Sussex, which were kept on free range, and began to lay in February, 1924. As they were with the other hens, and I do not trapnest, I do not know their laying record until the next autumn. These pullets began to moult early in July, and by the end of August were in full lay again. I wanted to hatch some early Light Sussex chicks, and these pullets had developed into very fine hens, so I put them in a pen with a February, 1924, cockerel on November 11th. I kept this pen going until May, 1925, and the seven hens laid, on an average, four eggs per day for the six months.

I started an incubator on December 31st, and hatched out 80 per cent., and all through the breeding season I did not have an infertile egg from this pen. The chicks were very healthy, as I reared 90 per cent. For my autumn hatching I use the same pens as for the spring, and find the eggs very fertile. I shall certainly go on with autumn hatching, as I consider it most profitable.

Yours truly,
E. JAY (Miss).

EARLY HATCHED PULLETS.

Dear Mr. Newman,—As the readers of "Eggs" are asked to give their experiences on early-hatched pullets, I should like to give a few words on the above subject, having for over a dozen years hatched in January chiefly heavy and general-purpose breeds.

I have found them a paying proposition. They are hardy, and crooked breasts no more in evidence than their later-hatched sisters, and very little trouble with leg weakness if properly managed. They lay a few small eggs at first at an early age, then a quick moult or partial moult, and lay again when eggs are at a high price.

Some of my reasons for making a practice of always hatching in January are :—In the first place, one can never foretell for certain what his prospects will turn out at the end of the hatching season. There is always an element of speculation in the business: what with incubator and brooder troubles, mortality from various causes, such as vermin, etc., or some years showing a preponderence of cockerels. I am always hearing of one or other of these things taking place. Also, an exceptionally bad spring as regards weather. If you are let down for March hatchings from any cause, you have in January pullets a reserve force to support your requirements. If you are well enough off in March and April hatchings to meet your requirements, and cannot keep both January and later hatchings, at the worst the early pullets should sell well as spring chickens, otherwise I fear for the later-hatched cockerels (those that are sold for the table).

It is the practice of some, when they have had ın indifferent season, to prolong their hatchings ill too late, to make up as they think the deiciency, which of course cannot make good the ime lost. Of course, the necessity of a reserve of ullets in some cases need not apply, as one may ave an incubating and rearing plant sufficient for ater-hatched chickens even if the results are not good. In conclusion, I prefer after March and arly April those chickens hatched in January to ny other months, as regards heavy breeds.

I am, yours truly,

E. BATH.

GRADE "A."

Sir,—As I anticipated, my recent plea that "Grade A" should not be saddled with "Eggs by weight," as met with opposition from advocates of the latter, vho by dragging a shoal of indigestible red herrings of assorted sizes) across the straight trail of 'RESHNESS, may very well endanger the whole cheme.

Our correspondent dismisses the matter in a line—'The public want large eggs, and should pay for hem"—agreed, but that is the whole point. In ctual practice, will they? Speaking of my nearest own, I can say with some confidence that they won't. nly one out of some two dozen retailers stock a largeraded egg, and he gets to-day one penny a dozen more etail than eggs fetch wholesale and ungraded in a ocal market.

Recently, at my request, another retailer put on a ¼oz. grade. The public wanted them all right, but ould they pay more for them? Not they!

I have, too, read often in "Eggs" that market uyers treat graded eggs with scant ceremony.

Another correspondent laments the fact that we are eing beaten by the Dutchman for size of egg. With heir lower costs of production and lower standards of ving, one might as well try and compete with the hink for cheapness. No, stick to FRESHNESS—here, and there alone, lies our strength. Incidentally, he same gentleman was politely sceptical of my contention that, at the expense of numbers, it was not ery difficult to produce plenty of 2¼oz. eggs. Peraps he will be more sceptical when I mention that I eep the maligned White Wyandottes? I may add at the remark was not based on theory.

It is, of course, possible that a few retailers who ave suffered from an epidemic of small eggs might ke to BUY by weight.

To settle the matter might I suggest that the Counil of the S.P.B.A. should ascertain the opinion of e retail trade.

I am, Sir, Your obedient Servant,

K. M. CAVE, Major.

POST-MORTEMS.

E. B. The trouble with the duck was marasmus consequent on heavy tape-worm infestation, and no doubt the others that have died were similarly affected. It is only a matter of good fortune that the brown ones have so far escaped. The intermediate host of this tape-worm is one of the small water crustaceans which become infected by feeding on excreta containing the eggs of the tapeworm; upon being eaten by a duck, the crustacean becomes dissolved by the digestive juices and the intermediate form of the tape-worm liberated. In course of time the embryo becames mature, develops segments, these become filled with eggs, and detached from the parent worm pass out with the excreta to again infect other crustaceans. The birds should receive a full purgative dose of Epsom salts in a small mash, and then either treated individually by giving each a five grain pill of Areca nut, or en masse by mixing one teaspoonful of powdered Pomegranate root bark in a mash for 50 birds. The droppings should as far as possible be collected and destroyed by mixing with quick-lime, and wetting with water. I should advise you to write to Mr. Newman for a formula for a balanced ration for stock ducks, as he is the authority on these matters, and could give you the benefit of his experience in a formula suited to your own particular requirements.

D. J. The post-mortem findings in the two birds were as follows:—(A) The cause in this case was apoplexy due to egg binding, the egg being abnormally large, and situated transversely in the uterus. In addition, the liver was studded with the miliary tubercles of acute tuberculosis, and there was also tubercular "bumble foot." (B) Generalised tuberculosis, with a terminating tubercular peritonitis. This was a particularly bad case, every organ of the body, lungs included (lung affection in birds very rare), being smothered with tubercular deposits. I am very much afraid that this disease is the cause of all your losses, and that the "bumble foot" is mostly tubercular, and quite possibly the spots in the mouths are in the same category; they are certainly not roup. Surgical tuberculosis is not necessarily an indication of generalised infection, and often remains only a local condition, but, on the other hand, the germs of T.B. being present, there is nothing to prevent other subjects from becoming infected from these local lesions. The immediate incontacts of these birds, and all the bumble foot cases, should be isolated or destroyed, and the premises disinfected most strenuously.

R. H. P. The post-mortem examination of the W.L. hen showed that the cause was tuberculosis of the lungs. This is a rare condition to find in birds, the lungs usually escaping, even in generalised cases of the disease. The abdominal viscera were also becoming secondarily affected, but the primary situation of the disease was the

(Continued at Foot of Previous Column).

ings. I should advise the isolation of the immeiate associates of this bird, and the destruction f any that show signs of ailing. Disinfection of e premises is most important to prevent recurence in the future, and nothing that these birds ave been in contact with should be used for others ntil rendered incapable of carrying infection.

National Poultry Institute.

STATEMENT BY THE POULTRY COMMISSIONER.

Good progress has been made during the past six months in the arrangements for establishing the National Institute of Poultry Husbandry at Harper-Adams' College. An architect has been appointed to take charge of the work of erecting the Institute building, the Service building, and the Director's residence, and arrangements for the electrical equipment, water supply, and general drainage are well in hand. The Director's residence has already been started, as has also the work of building a new road to the Institute buildings. In addition to this, the Director of the Institute has prepared plans of necessary poultry houses for consideration by the Ministry and the National Poultry Institute Advisory Committee. All the proposals are being submitted to the Poultry Institute Advisory Committee for their approval, and the arrangements for obtaining Treasury sanction to the requisite expenditure are proceeding satisfactorily.

To meet immediate needs, twelve colony poultry houses have been erected under contract, and are now filled with growing pullets on the new range of the experimental farm. These colony houses are proving to be very efficient for their purpose, and are attractive and neat in appearance. Students from the College have been erecting the pigeon building, and are making a neat job of it; this gives them practice, and will save an appreciable amount of funds. Certain buildings of the College, which have been made over to the National Poultry Institute, will be altered or rebuilt for the accommodation of waterfowl and rabbits.

As regards poultry stock, about 3,000 chicks and 600 ducklings have been reared on the farm this spring, and from this stock, as well as from the adult fowls on the plant, will be chosen birds for experimental pens this autumn, when it is hoped that the new plant will be completed.

The new Journal of the National Institute of Poultry Husbandry was launched on March 20th last, and five numbers have already appeared. Special departments have been established by the Editor, who is Professor Willard Thompson, the Director of the Institute, for the purpose of carrying to the poultry public the records and work of the Institute. With regard to the proposed educational courses at the Institute, plans are now being formulated for the offering of (*a*) a one year practical poultry course, and (*b*) a more complete two-year course in poultry husbandry, to begin with the autumn term of 1925. These courses are being planned to give students the most complete and modern poultry education possible.

The Director has addressed several gatherings of poultry-keepers in various parts of the country during the past six months, and has found that considerable interest is being taken in the proposed programme for the new Institute. The Director was also in attendance at the Royal Agricultural Show at Chester, where an educational exhibit from Harper-Adams' College and the Institute was staged.

With regard to the research work in poultry diseases, which is being carried on steadily, on lines already indicated to the National Poultry Council, a good deal of research during the past year was mainly concerned with Bacillary White Diarrhoea, which is one of the most serious maladies which the poultry industry has to contend with at the present time. A large number of experiments have been carried out, both in the laboratory and in the field, and as a result many important conclusions have been arrived at. Some of the matters which have been investigated are:—

(1) The necessity, or otherwise, of a bacteriological examination in the routine diagnosis of the disease.

(2) Percentage of infected eggs laid by "carrier" birds.

(3) The effect of the disease on the egg-laying capabilities of the fowl.

(4) Percentage of "carriers" amongst chicks which survive an outbreak.

(5) Whether infection occurs between diseased and healthy adults.

(6) A study of the "carrier" bird:

  (*a*) Distribution of the causal organism (B. pullorum) in the internal organs;

  (*b*) What percentage, if any, of "carriers" recover from the disease.

(7) The value of vaccines and anti-serum in combating the disease.

(8) The agglutination test:

  A large number of experiments and field observations have been carried out during the year in order to ascertain the true value of this test as a means of eradicating the disease.

(9) Methods of control and eradication.

The results obtained from these investigations, and the conclusions arrived at, will form the subject of a paper which will be read at the Harper-Adams' Conference in August by Captain Doyle, the officer in charge of the work.

For some time past special attention has also been given to the subject of Diphtheritic Roup, with the object of obtaining, if possible, a reliable method of immunising fowls against this disease. One method has been discovered which has already given hopeful results in experiments carried out at the laboratory, but which will now require to be tested under field conditions. There are certain objections to this method, but, provided the field trials are favourable, it is hoped by its employment to reduce the mortality and the duration of the disease on infected premises. Roup is undoubtedly the most formidable malady of the adult fowl in this country, and in view of its importance to the industry, it is intended to concentrate efforts upon it in the near future with the object of evolving some reliable method of prevention, if possible. In view, however, of the large volume of work which has already been carried out by investigators in various parts of the world, and the scant success which has attended their efforts, the difficulties which will be encountered are fully appreciated.

With regard to Roup, I should like to point out that if on the first appearance of this disease on a farm it is treated with indifference and the elementary rules of disinfection and isolation are ignored, disaster is bound to follow. If, however, every suspected case is isolated, and thorough disinfection practised, there is little fear of a big outbreak. This, of course, is a general rule which applies to all contagious diseases. The Ministry has recently issued a leaflet on Roup, in which recommendations based on present knowledge, so far as it goes, are made for its prevention. Until such time as more scientific knowledge has been obtained as the result of systematic study of this disease, I would recommend all poultry farmers to carry out the recommendations made in the Ministry's leaflet. A copy can be obtained by sending a post card to the Ministry's Office, at 10, Whitehall Place, London, S.W.1.

The research work in poultry nutrition, which is being carried out by Mr. Halnan at Cambridge, continues to make satisfactory progress.

Balance experiments carried out with White Leghorn pullets indicate that egg laying is not preceded by a long period of storage of nitrogen or calcium, the demands of the bird for calcium and nitrogen during egg laying being almost, if not completely, met by increased retention of these elements from the available food supply. The metabolism of phosphorus in the bird appears to be linked with that of calcium, and excessive calcium feeding may lead to depletion of phosphorus reserves. The number of eggs laid by a bird during each egg cycle appears to be a fundamental characteristic of the bird itself, and does not appear to be regulated (providing minimum requirements are met) by variations in the food supply.

In studying the composition of the White Leghorn from birth to maturity, an interesting difference appears to exist between the cockerel and the pullet. Under precisely similar conditions of nutrition and environment, more fat appears to be deposited in the pullets than in the cockerel.

With regard to the breeding research work, which is being carried out by Professor Punnett at Cambridge:

The main research in progress is that connected with the inheritance of fecundity. It is generally agreed that high fecundity in the hen is hereditary, and that it depends upon at least several distinct factors. But as no adequate analysis has yet been made the precise number of such factors, as well as their nature, remains undetermined. The first thing to be determined is whether any of the hereditary factors show sex-linkage—whether the highly fecund hen gets from her sire a something that makes for extra fecundity which she cannot obtain from her dam. Dr. Pearl says that she does. Dr. Goodale says that she does not. At Cambridge a new method had been devised for attacking this problem. It depends upon the fact, ascertained from experiments with other creatures, that characters which are sex-linked also show linkage with one another. In poultry Rock-barring and silver are characters which are both sex-linked, and consequently also show linkage with one another. If now there is a fecundity factor which is sex-linked it will show linkage with these two plumage characters, provided that the matings are made in a proper way.

The experiment consists in mating a Barred Rock hen of high fecundity with a Black Sumatra cock. Barring, silver, and high fecundity go in from the hen's side of the cross, while from the cock's are derived non-barring, gold, and low fecundity. A number of such first-cross birds were bred in 1924. This year some of these first-cross cockerels have been mated to: (1) Sumatra, and (2) to Silkie hens, and about 100 chicks are now in course of being reared. The pullets will be trap-nested during the coming year to ascertain whether the better layers are more often found among the barreds and the silvers than among the unbarreds and the golds. Should this turn out to be the case, it will point to there being a definite sex-linked factor for fecundity, and further experiments would then be devised for putting the matter to the test.

With regard to the southern table poultry experiments, it will be remembered that the Southern Sub-Committee was set up in 1923, and with the approval of the Main National Institute Advisory Committee, decided to undertake experiments on the following lines:—

(1) To ascertain the best methods of feeding and marketing at all times of the year birds produced as a by-product on commercial egg farms.

(2) The comparative value for table purposes of the breeds most generally kept on commercial egg farms, with the breeds and cross-breeds generally regarded as the best for table use.

(3) The amount of weight and the value of weight gained by the various breeds and cross-breeds used in the investigations in relation to the weight and value (cost) of food consumed.

Preliminary trials were undertaken from January to October, 1924, in order to gain some experience as to the best method of conducting the experiments proper, which were timed to commence in January, 1925. During these preliminary tests certain stock birds were found to be carriers of B.W.D., and on this account hatching from the Rhode Island Red pen had to be abandoned. The Silver Grey Dorking-Light Sussex Cross was also not included in the test, owing to the difficulty which was experienced in obtaining suitable Dorking male birds; consequently only White Leghorns, White Wyandottes, Light Sussex, and Indian Game-Light Sussex cross were dealt with during the preliminary test

It would, of course, be premature to draw any definite conclusions from the results obtained during the preliminary test carried out in 1924, as only a limited number of birds and breeds were dealt with in this test. It may, however, be stated, without prejudice to any results which may be obtained from future tests on a more comprehensive scale, that there were indications that chicks become saleable as petit poussin of from 14ozs to 16ozs. in weight, at ages varying from 6½ to 9 weeks, the ages increasing as the hatching season advances into the autumn. The average cost of feeding a chick to the petit poussin stage works out at 6d. per bird. The average cost of feeding birds from the petit poussin stage up to 14 weeks of age, appears to be about 9d. or 10d. more per bird.

From the point of view of the production of Table Poultry, of the breeds and cross-breeds used during the preliminary experiments, it would appear that the Indian Game (male), crossed with Light Sussex hens, produces the best bird for this purpose at all stages, and has on the average so far shown the best profit over feeding costs, either as a Petit Poussin "Off the Run," trough fed or crammed.

There is, however, in this cross a tendency to throw a certain number of yellow-legged and yellow-skinned birds, the percentage would appear to be about 20 per cent. Of these the yellow colour when present is deeper and more decided in the cockerels than in the pullets.

An additional advantage in favour of the Indian Game cross is that the chickens produced all appear very close feathered, and do not require so much plucking as some of the pure breeds dealt with.

Of the pure breeds used in the preliminary experiments, the Light Sussex has done better than the others. Having a white skin and legs, it produces a nicer looking and better quality table bird than the White Wyandotte. In point of size and growth there does not appear to be much to choose between these two breeds, but the White Wyandotte, having a yellow skin and legs, if killed before being fattened, loses in quality and appearance on this account. When, however, these birds are properly crammed and finished as "Surrey" fowls, the skin becomes nearly white, and the yellow colour is only noticeable on the legs.

The R.I. Red was only used during the latter period of the Preliminary Experiments, but it would seem to be decidedly inferior, as a table bird, to the three others mentioned above. They do not appear to grow so well, and even when crammed and finished as "Surrey" fowls, they have a decided tendency to retain the coloured skin, which, although not exactly yellow, detracts very much from their appearance and quality.

The White Leghorns do not, of course, attain the size of the "heavy" breeds and the cross, but some of these (Leghorns) hatched during June and July, which were sold as unfatted birds straight "off the run," produced quite plump birds of about 2¼lbs. at 14 weeks of age. Although as a breed they also appear to make additional profit over *feeding costs*, if kept on and crammed, the gain is not so great in proportion, and, from the point of view of the Commercial Egg Farmer, it would appear that of those hatched early in the season, it would probably be most profitable to dispose of the cockerels not required for stock, as soon as they reached the Petit Poussin stage, or at any rate, as green chickens straight "off the run."

It was noticeable amongst the earlier hatched White Leghorns that the cockerels of this breed were as heavy at six weeks of age as those of the "heavy" breeds.

It must, however, be understood that no definite deductions can be drawn from the records obtained to date, as the amount of food consumed per bird was varied from time to time in different batches of the same breed, for reasons which have not yet been ascertained.

As regards the present year's experiments, it may be mentioned that 2 091 chicks have been hatched up to the 30th June, 1925. No records of the results obtained from these birds are yet available.

The Northern breeding experiments for egg production, which are being conducted at the Reaseheath School of Agriculture, are proceeding satisfactorily.

The object of these experiments is to test out, under careful recording, methods already being tried by Utility breeders; to test certain methods of breeding which it is thought may result in the production of high-laying strains and to collect as much data as possible that may be useful in the selection of breeding stock for egg production.

The three breeds—White Leghorns, White Wyandottes, and Rhode Island Reds—were chosen for the experiments, and the original female birds included six good and six poor layers of each of these breeds, as ascertained at a Laying Trial. The male birds were selected from high-laying strains.

A large number of pullets were reared in 1924, and after all the defective and non-typical of these had been sold for table purposes, as many as possible of the progeny of certain birds of the original stock were retained for 1925. Cockerels were selected in the same way. The number of pullets used for the various matings was 119, and the number of cockerels 24. Included in the latter are six of the 1924 male birds in the Father and Daughter mating, and six purchased from outside for the Out-breeding mating. The remainder of the pullets retained are being trap-nested in order to collect data on their egg-laying capacity, which will assist the Sub-Committee in drawing conclusions from the performance of their mated sisters.

In addition to the young stock, the mothers of the pullets and cockerels have been retained, and are being trap-nested in order to collect further data on their egg-laying capacity.

The matings are as follows:—Mother and Son, Father and Daughter, Brother and Sister, Half-Brother and Half-Sister, Uncle and Niece, Cousin and Cousin, and Out-crosses. There are also matings of the progeny of birds that have shown a capacity for breeding pullets and cockerels respectively.

Care has been taken to retain reserve pullets for each mating, and duplicates of the entire matings have been arranged in order to insure against the possibility of the death of pullets or cockerels. Progeny from the same birds has been used for the inbreeding and outbreeding sections, so that these sections are acting as controls one to the other.

Incubation was commenced early in February, and the results have proved satisfactory. Some 2,126 chickens are being reared, from which the stock for 1925 will be selected. The rearing is being carried out on the free range system, for which purpose additional five acres of land have been fenced in, and twelve 7ft. x 5ft. houses have been purchased. The station now occupies about eight acres, and the lay-out is much admired by visitors.

Comparatively few deaths of adult birds have occurred. Dead birds are being forwarded to the Ministry of Agriculture's Veterinary Laboratory for examination, and particular attention is being paid to diseases affecting the reproductive organs.

Standard food mixtures have been adopted for the

(Continued at Foot of Column Next Page).

National Poultry Parliament at Harrogate.

About seventy-five delegates were present at the meeting of the National Poultry Parliament, which was held at the Belvedere Rooms, Harrogate, on Tuesday, July 14th, and the two following days. Mr. Tom Newman, the President, was in the chair.

A cordial welcome was offered the delegates by the Mayor, Councillor C. E. Carter, who remarked that the N.P.C. gave a unity to the poultry industry which was of great value, and tended to stimulate outside interest. Mr. Clem Watson proposed, and Mr. Goode seconded, a hearty vote of thanks to the Mayor, which was carried with applause.

The Minister of Agriculture.—Mr. Edward Brown, the Secretary, read a letter from the Minister of Agriculture, deeply regretting that he could not be present as arranged; his regret was the greater because the Parliament was meeting in his own constituency. It was not lack of interest which caused his absence, but the necessity of his attendance in the House of Commons. He hoped that week to introduce a bill into the House, which would include a clause for the compulsory marking of imported eggs. With the passage of this Bill into law the home producer should reap the reward of his efforts, and have every incentive to improve his marketing methods.

The President said they had now completed another year in the history of the National Poultry Council. On the whole it was a gratifying one to them. If nothing sensational had been done, some useful work had been accomplished, and they had succeeded in strengthening their position with the industry, but with the increased scope of the work the problems would be more numerous and more acute, and the need for unity would be greater than ever. Disease was becoming more menacing, the aid of the scientist they welcomed, but there was more important work to be done in the field than in the laboratory. The marking of imported eggs had now become practical politics. The coming conference on the organisation of the marketing side was on this account of very great importance, for the Bill would be of little value if there was no better organisation than at present existed. Thanks, almost wholly, to the efforts of the Council, the National Poultry Institute was now in being, and they could congratulate themselves on that.

The Year's Work.—Mr. Edward Brown read the Annual Report of the N.P.C. He said those engaged in the industry had come through very trying times, better than had been evident in other pursuits. It was regrettable that the unity they had aimed at had only been partly attained; societies and individuals for reasons best known to themselves held aloof.

As previously reported, the Legal Defence Fund has enabled the Council to take steps to defend poultry-keepers in several directions, which would not otherwise have been possible, notably in respect to assessments for Income Tax and rating. Despite the fact that in almost all appeals which, on the advice of the Council, have been made to Special Commissioners, and in several heard by Local Commissioners, decisions have been given that poultry farming is husbandry within the meaning of the Finance Acts, and should be assessed under Schedule B, that is, on the basal of rental, up to present time the Council has not been able to compel the Inland Revenue to carry a case to the High Court of Justice so as to settle the question generally, thus putting an end to what is a persecution of poultry-keepers on the part of that Government department, involving a large amount of trouble and considerable expense to those concerned. Notice of appeal, however, has been given in one important case, and it is hoped that it will be carried to an issue. The National Poultry Council has guaranteed 50 per cent. of the costs of defence in this case, in which guarantee the National Farmers' Union is sharing to the extent of 25 per cent. Owing to the action of the Council, the rating authorities are almost universally assessing land used for poultry farming as agricultural land, liable for one-quarter the full rates imposed.

From many parts of the country reports have been received as to losses arising from the worrying or killing of poultry by dogs, which is becoming a very serious question, involving not only immediate but contingent loss. In order that the law as to the responsibility of owners of dogs should be clearly defined, the Council made a grant from the Legal Defence Fund towards defending a case in which a County Court judge's award of damages for the killing of 175 chickens was appealed against in the High Court of Justice, where it was reversed on the ground that the owner did not know the animal was vicious. Inquiries have shown that the law does not accord to poultry the same protection as in the case of cattle and other domestic animals. Steps are being taken, in conjunction with the National Farmers' Union, to secure an amendment of the law, and it is hoped that such will be accomplished. Dog owners must be made responsible for injury done by their animals.

Once more the National Poultry Council desires to make acknowledgment of the great services rendered by the honorary solicitors, Messrs. A. E. Hamlin and Co. (2, Soho Square, London, W. 1), in so freely and generously giving advice in respect to Income Tax and rating, responsibility of dog owners, and a multitude of other directions, for which the thanks of the poultry industry as a whole are due.

An Arbitration Board.—With a view to preventing disputes arising between sellers and purchasers, and in other ways, being carried into the Law Courts, thus incurring heavy legal expenses, the National Poultry Council has decided to form an Arbitration Board. It may be hoped that wherever difficulties may arise in the way indicated advantage may be taken to avoid litigation.

The annual examinations arranged by the National Poultry Diploma Examination Board were held at the Lancashire County Farm School, Hutton, near Preston, July 15th to 18th, 1924, and the thanks of the National Poultry Council have been expressed to the Lancashire County Council for the excellent arrangements made, and to the examiners. Ten candidates presented themselves, of whom five passed in all subjects, three failed in one or two subjects, and two failed entirely. Four of the five who passed (one has not yet complied with Regulation 11. as to practical training), and one candidate who passed in 1923 were awarded the Diploma (N.D.P.). The next examinations will take place at Harper Adams' College, Sept. 14th and 15th, 1925.

The Government on coming into office at once announced its intention of introducing the Merchandise Marks Bill as one of its own measures, and of granting the necessary facilities for carrying it on to the Statute Book, and on various occasions the Minister of Agriculture and others have reiterated this promise. Steps have been taken for urging that the promise made shall be carried into effect this session, both upon the Government and the Agricultural Committee in the House of Commons. It is satisfactory to report that the support given by local authorities in action taken to compel poultry-keepers maintaining their fowls in a sanitary condition, thus avoiding all danger to public health, have had the effect in many urban areas of securing a great improvement in the methods adopted and conditions of poultry runs.

A considerable number of cases have been reported to the National Poultry Council where birds suffering from or are carriers of disease are sold, either privately or at public markets and auctions, as a result of which disease is spread throughout the country. It has endeavoured to obtain an order that poultry shall be inspected at markets and auctions; up to the present, however, without success, owing to the difficulties and costs of inspection. This question is being pressed upon the authorities, and it is hoped that the object will be attained. There is no

NATIONAL POULTRY INSTITUTE—continued.

duration of the experiments in order to keep the feeding as uniform as possible.

Records are being carefully kept, and these are to be examined by an expert, who will interpret them for the guidance of the Sub-Committee. It is hoped that in time valuable information on breeding for egg production will be available for the general poultry breeder.

question that the menace of disease among poultry is a growing one, and that there are serious dangers to the poultry industry in this direction. Whilst in a number of instances the National Poultry Council, in conjunction with the Masters of Foxhounds Association, have obtained more adequate compensation from Hunts where poultry have been killed by foxes, of late reports indicate that the depredations of these vermin are increasing and that Hunts are not keeping them down to the minimum. In others the Hunts refuse to pay compensation or offer contemptible amounts under which conditions poultry-keepers must protest themselves. Unless Hunts are able to pay for their sport they have no justification in continuing. Very sad cases have been reported in which struggling men have been ruined, as they could obtain no redress.

Following upon the consideration of scoring at laying trials, and adoption of the recommendations made to secure greater uniformity, the National Poultry Council has appointed a Laying Trials Committee and arranged for registration of such trials as are willing to conform to the regulations laid down, copies of which can be obtained on application.

Among other subjects which have received attention may be mentioned: Railway Companies and Compensation and Facilities at Exhibitions; Manurial Values of Poultry in relation to compensation on determination of tenancy; Greater Consumption of Eggs and Poultry; Preservation of Eggs, etc. The National Poultry Council has decided to convene a National and representative conference of producers, societies and distributors, wholesale and retail, to consider what steps are necessary to improve and enhance the qualities of native eggs and poultry, and to encourage their consumption. Arrangements are in progress for this conference, which will meet at as early a date as can be conveniently arranged. It is hoped that by bringing together all the various interests definite suggestions may be made for meeting competition of imported supplies.

The statement of receipts and expenditure to be presented by the treasurer indicates how limited is the total support given to it on the part of the great bulk of those engaged in the poultry industry. Money is essential to meet the charges of administration in every direction. Unless it is forthcoming the operations of the Council must be curtailed, or it must cease to operate. Much more might have been accomplished had the means been available. There are now projects which are withheld for the reason that those who propose schemes do not consider the costs of carrying these out, because they do not share in the burden and responsibility of doing this. The few have expended freely in time and money in their support of the National Poultry Council. A larger number have materially helped by contributing as patrons, for which its thanks are due.

Mr. A. H. Brownson, the Treasurer, presented his report. He remarked on the generosity of the members of the S.P.B.A. who the previous year had contributed £230 to the General Fund and £100 to the Legal Defence Fund; this year he had been handed a cheque for £255 6s.

Mr. Skinner said that, while they all appreciated the splendid contribution of the S.P.B.A., they should not forget that the N.U.P.S. had sent £30, mainly contributed by small societies. He was there in the interests of the underdog. The accounts show an excess of income over expenditure of £8 17s. 6d. The report was adopted.

The remainder of the session was occupied in listening to the statement of the Poultry Commissioner with reference to the progress of the National Poultry Institute. The report appears in another column.

In the afternoon the delegates visited the well-known farm of Mr. Frank Snowden, at Cowling, Keighley, and were entertained to tea by Mr. and Mrs. Snowden. The keenest interest was manifested, many famous winning pens which had upheld the reputation of the English breeder abroad were on view, and others which had won laurels for their owner in this country, included among these were the birds which won the "Daily Mail" two years' test. The splendid condition of the stock, and the whole lay-out of the farm, won Mr. Snowden many warm compliments, and everyone enjoyed the visit and came away highly pleased with what they had seen.

Wednesday Session.—The early part of the morning was spent in the election of officials. The President announced that Mr .Leslie Williams had written, withdrawing his nomination for the Vice-Presidency, assigning as his reason the restoratio of Mr. Walker to health, and he would not oppose one wh had done so much hard work on behalf of the Council; an secondly, he was of opinion that it was inadvisable that th Presidency should be held two years in succession in the South It was also intimated that Mr. Bruce Wilcock had withdraw The President then stated that he had pleasure in announcin that Mr. Walker was elected.

A letter was then read from the Treasurer, Mr. A. H. Brow son, stating that, for purely personal reasons, he was compelle to resign his office as Treasurer. The resignation was receive with very general regret. Mr. Brownson had fulfilled his dutie as Treasurer with every possible satisfaction to the Counci had given the greatest possible assistance at the most critic period, and had carried out the duties of his office with th greatest enthusiasm. He is still to retain his office as Joi Secretary. It was announced that Col. Sandbach would act a Hon. Treasurer.

As Col. Sandbach had succeeded Mr. Brownson as Treasure it became necessary to nominate another Auditor. The Presiden moved the suspension of the standing orders, which was agree to. Mr. Longbottom and Mr. J. G. Kitson were nominate Mr. Longbottom withdrew in favour of Mr. Kitson, and th latter with Mr. Collier was declared duly elected.

The retiring President then thanked all those present for th support and confidence they had given him during his year office. Through their kindness his task had been an easy an pleasant one, and he should always look back upon the tim with pride and pleasure. He particularly wished to expres his gratitude to the Secretaries, who had assisted him in ever way. He also thought a word of appreciation was due to th Press for the generous support it had given the Council. The was little criticism, and such as there had been had been co structive and of real assistance to them. In installing the ne President, Mr. Clem Watson, he said: Mr. Watson was to well known to them to need an introduction. He had rendere great services to the industry, both in this country and abroa He was a past President of the Poultry Club, a well-know judge, and he was convinced that such an able and experience man would have the confidence of everyone. He wished M Watson a most successful year, and a very pleasant one.

Acknowledgments.—Mr. Longbottom moved a resolution thanks to the late President, Mr. Tom Newman, and th Auditors, Col. Sandbach and Mr. Collier. This was seconde by Mr. Goode, and carried amidst applause.

Presidential Address.—The President, on rising, received a ve hearty reception from the delegates present. He thanked the all for the honour they had done him in electing him to so gre an office. He had been keenly interested in the National Pou try Council since its inception, and they must all recognise that would be a disaster to the industry if, from lack of support indifference on the part of those who should support it, it cou could no longer carry on. He was sorry to see that so many the specialist breed clubs were not represented on the Counci He then proceeded to speak of science in relation to poultr keepers. In his opinion the scientist had done them a lot harm. They were too hasty in reaching their conclusions, a the consequence was the poultry-keeper hardly knew where was from one day to another. Quite recently there had be trouble in connection with a case of B.W.D., and two scientis had said it was not possible for infection to take place from e to egg, and two others had flatly contradicted them. The breed was in a bad position. He thought the scientist should exerci more care. They wanted a little more practice and a little le science. Mr. Watson concluded by appealing for greater uni and support for the National Poultry Council, emphasising wh he had previously said in reference to the great need of a centr representative body, and assuring the delegates that he would all in his power to further the interests of the Council.

Presentation.—At the conclusion of his address, the Preside said he had a very pleasant duty to perform, and a most une pected one. The Barcelona Congress, he believed, was direct responsible for it. He asked Mr. and Mrs. Tom Newman accept from the members of the National Poultry Council a so silver coffee service together with the very best wishes of t Council for their future happiness.

Mr. and Mrs. Newman suitably thanked all present for t very handsome gift and for the good wishes.

Resolutions.—The Council then proceeded to consider the re lutions. "Registration of National Poultry Council," moved

Mr. P Hedworth-Foulkes Seconded by Mr. Tom Barron. This was agreed to

"Poultry Farming and Agriculture," moved by the N.U.P.S. The resolution was to the effect that the National Farmers' Union be asked to use its influences with county branches for the appointment of a Poultry Committee to each branch. Agreed to unanimously.

"Business Training at Agricultural Colleges." Moved by Mr. Dowden, and seconded by Mr. Bostock Smith, on behalf of the S.P.B A. Both mover and seconder urged the need of business and training, and insisted that many failures in poultry-farming were entirely due to lack of business knowledge. Opposed by Mr. Geo Palmer, on the ground that there was no time for such training, which should be acquired elsewhere. An agricultural college was not expected to give a business education, but to train students in agriculture. Opposed by Mr. Skinner, on the ground that he represented the under-dog, and the man who had not the means could not possibly obtain such a training. After further discussion the President put the resolution to the meeting, and it was declared carried.

"Economics of Poultry Farming" (Lancashire Federation). Moved by Mr. Hammett, and seconded by Dr. Helm. The resolution asked that the N.P.C. be instructed to secure the cooperation of Agricultural Colleges in obtaining independent and authorised records as to the Economics of Commercial Poultry Farming on similar lines to those already published for East Anglia and Yorkshire, in respect to Poultry and General Farms: (1) Capital. (2) Costs of Production of Eggs and Poultry. (3) Profits on Groups of Selected Poultry Farms in different areas. The resolution was carried unanimously.

"Responsibility of Owners of Dogs and Cats" (Poultry Club). Moved by Mr Skinner, seconded by Mr. Birkhead. Mr. Ardern moved that cats be omitted, as they were not a domestic animal, and if shot no damages could be incurred, provided the owner was not breeding for profit. It was pointed out by the Secretary that the Parliamentary Committee had an interview recently with the Agricultural Committee of the House of Commons, and as a result a Bill had been drafted by the Council's solicitors, which would be presented as soon as possible, and would have the full support of the committee. The resolution was agreed to unanimously, the word "cats" omitted, as suggested by Mr. Ardern.

"Declaration of Preserved Eggs" (Lancashire Utility Poultry Society). Moved by Mr. Collier, seconded by Mr. Hamnett. The resolution asked that steps should be taken by the Council to embody in the Merchandise Marks Bill that all cold stored and preserved eggs, imported into this country, should be marked as such, also English preserved eggs. Further consideration should be given to small poultry-keepers in this country who are preserving large quantities of eggs which should be marked as preserved if offered for sale. All poultry-keepers preserving eggs should be registered similar to milk sellers.

Mr. Dowden moved that the last sentence be deleted.

Mr. Tom Barron moved that the words, "All persons who buy or store preserved eggs for resale shall be registered as milk sellers are.'

Considerable discussion took place, many of the delegates present being of opinion that the proposals were impracticable, and would burden the progress of the Bill. It was eventually carried by a large majority with Mr. Barron's amendment.

"Conference on Diseases of Poultry" (S.P.B.A.). Moved by Mr. Tom Newman, seconded by Dr. Helm.

Mr. Newman said that roup in virulent form appeared to be on the increase, and was causing ruinous losses. They knew now that it was due to a filter passing virus, but beyond that fact they knew no more than they did 20 years ago. There were hundreds of quack remedies, but the methods were the same as in the time of their grandfathers. The object of the proposed committee would be to collect such knowledge as was available, and give it to the public, so that they might be able to make the best possible use of it. It was in no way intended to reflect on the research worker or the scientist. They appreciated all that was being done and their faith that a solution would come from them was no no way shaken, but they could not sit with folded arms.

Sir Stewart Stockman, who was announced to speak to the resolution, said he very much regretted that he had been compelled to come a day earlier than was announced, as he had hoped to have an opportunity of meeting Mr. Toovey, but what he had to say he would have said had that gentleman been present. First he must allude to the remarks made in the Presidential address. He could not agree with what Mr. Watson had said, and further it was inconsistent with resolution 8, in which the Poultry Club had asserted that "it is of the utmost importance to the Poultry Industry to have speedy notice of the latest investigations concerning Bacillary White Diarrhoea, Coccidiosis, and other diseases of poultry." As to the case he had cited ,he should remember that one positive would always beat two negatives, and it had been definitely proved that there was infection from egg to egg. The scientist could only give them such information as he possessed. Whatever had gone wrong in the poultry world was not the fault of the scientist. They must blame themselves for that. He now wished to refer to Mr. Toovey's farm. When the outbreak occurred, Mr. Francis telephoned to him on Mr. Toovey's behalf, and asked that someone should be sent down. He had been obliged to reply that he could not do so, as if he complied with the request, he should have to do so in the case of every Tom, Dick, or Harry who was in trouble. The staff at Weybridge was a very small one, and their time was fully occupied in investigating disease. It was impossible for him to send to poultry farms whenever he was asked to do so. Eventually after more pressure from Mr. Toovey, he sent down Capt. Doyle, who was informed that the whole farm had been placed in the hands of someone who had guaranteed a cure, and that under the circumstances they could not accept his assistance. Capt. Doyle had made suggestions with regard to vaccines, but Mr. Toovey could not see his way to accept. He was very sorry, but they could do on more. Speaking to the resolution, he said it was nonsense for the mover to say they knew no more of roup than they did twenty years before. They did know more. He thought such a committee might serve a useful purpose in disseminating knowledge. It would help him if there was a central body to whom they could communicate their findings, as it was impossible for him to send someone to every public meeting to speak on disease. If at the end of, say 12 months, they could give information to some central body to disseminate, that should prove of assistance. Sir Stewart made some general remarks on disease and answered questions in reference to Fowl Pest. He said that the best chance of keeping the farm free from disease was to start with clean healthy stock, and be extremely careful in the introduction of new stock. If they did this they would escape disease, provided the sanitary laws were not neglected.

Mr. Newman said that whatever new knowledge the scientist possessed, he persisted in his assertion that we were not in a better position to fight roup to-day than we were 20 years ago. The object of the committee, if appointed, would be to disseminate knowledge. That was the real reason for the resolution, to give to the public what was known.

The resolution was carried unanimously.

Mr. Toovey.—The keenest disappointment was expressed that Mr Toovey had not been present to meet Sir Stewart Stockman. The President announced that he would be given an opportunity of speaking the following morning. His remarks are given here for convenience. Before he began his speech, which was listened to with rapt attention, Mr. Brown said he wished to apologise for neglecting to advise Mr. Toovey of the change of plan with regard to Sir Stewart Stockman. In the pressure of work, he had forgotten to send him a wire notifying him of the change.

Mr. Toovey said that it was a matter of the greatest regret to him that he was not present when Sir Stewart Stockman spoke. He would assure them he would say nothing in his absence which he would not have said in his presence. The disease first appeared at the end of January. It was endemic on the farm. He went to the Ministry of Agriculture, and told Mr. Francis of the outbreak. He was not concerned about it, as he thought it would get right. It got worse instead of better,and he went again, told them it was diphtheritic roup, coupled with bird pox and a high fever. He asked for help. Mr. Francis telephoned to Weybridge, and the reply was a telephone message to the effect that they didn t know much about roup. He probably knew as much as they did. They advised isolation, and sent a leaflet containing nothing which they did not know 20 years before. Again he went to the Ministry, and received the reply from Sir Stewart Stockman that he could not send down a man because if he did so every Tom, Dick and Harry would expect the same thing. He reminded Sir Stewart of a previous conversation, in which he (Sir Stewart) had asked for his collaboration. On this he agreed to send down Capt. Doyle. Nothing happened for several days. In the meantime he had agreed to an attempting to cure the stock on the no-cure, no-pay principle. A written agreement was made that he should clear it in four weeks. He failed to do so. Directly after the agreement was made a letter was received from Capt. Doyle, offering an appointment. He thought it best to let him see the farm, and he came, suggesting vaccinating 25 birds from a flock of 1,500 in a field which had not been attacked, isolating them for 18 days in case they infected others, and then placing them with the flock. That would have taken six weeks and he would not consent, as it was not very helpful. He feared they could not expect much from the institute as to the teaching of economic and technical matters. Private enterprise always had, and always would, beat Government enterprise. He never had attached importance to the Institute but he did expect something from the laboratories. There were only one or two scientists told off for poultry research work at Addlestone, and he regretted to say that they did not want more work. He believed they were trying to find a vaccine, but there was a great difference in roup, and he doubted whether they would find one which would be effective. Foot and mouth disease was easily cured, and he had no doubt they could find a cure for roup. He had at last received the greatest help from Mr .Brain, and he hoped now they would soon clear the farm. Mr. Brain had attacked the disease from all sides—the houses, the land, and through the food and the water. He had done great things, and he was very hopeful that they had found a cure. Judging from the immense number he had received, the disease must be far more menacing than the average poultry-keeper believed. Mr. Toovey was loudly applauded when he sat down, and it was agreed that a copy of what he had said should be sent to the Ministry.

Mr. Brain said that Bird Pox, Diphtheric Roup, and Canker can be cured. He had had a great deal of experience of it at the Midland Laying Test, and he would guarantee that no further outbreak of Diphtheric Roup would occur there. They would even accept birds suffering from the disease Roup is a blood disease, and they must purify the blood stream. They must fed well on easily digested food A great deal of the feeding of the present day was not sufficiently nourishing. Fumigation with chlorine gas was excellent, but they could not use that for flock treatment. B.W.D. in the chicken was the same as Diphtheric Roup in the adult; that they would also find. In the chick it attacked the intestines. in the adult the respiratory organs. Mr. Brain was listened to with keen interest, and he was loudly applauded.

Mr Geo. Palmer said roup was a curable disease, and he had cured many birds and bred from them afterwards, even males which had been very bad cases. He had made no secret as to his cure (carbolic acid).

"Information Respecting to Diseases of Poultry" (Poultry Club). Moved by Mr. A. P. Grant. This was the resolution referred to by Sir Stewart Stockman.

Mr. Grant said that after what had been said he was diffident as to speaking to this resolution. He had no instructions from the P.C. Under the circumstances he would not press the resolution.

"Liability of Vendors of Poultry and Eggs" (Poultry Club) (Mr. Skinner). This asked that model conditions of sale should be drawn up by the Council to protect the vendor from claims due to losses incurred after the eggs or birds had passed from his control to the purchasers.

Mr. Tom Newman said that a similar resolution to this had been moved by him on behalf of the S.P.B.A. three years ago at Leamington. They had been warned what would happen, and it had happened. The solicitors had drawn up conditions of sale. With all respect to them he did not think this was what was wanted. They needed a simple formula, which could be printed on the invoice or contract note; it was useless in the catalogue. Such a formula could be found under the Sale of Goods Act. He moved this formula be adopted. Mr. Brown could possibly tell them what it was.

Mr. Brown said that they had some difficult cases to deal with. He knew what Mr. Newman was referring to, and they had the assurance of K.C. that it would cover them.

Mr. Birkhead suggested that it should be sent to the societies.

Mr. Skinner said he would be pleased to accept Mr. Newman's amendment, which was carried unanimously.

Votes of thanks to the local committee, special reference being made to Mr. Frank Snowden, Mrs. Clay and Mr. Allen for the admirable arrangements made, were carried amidst applause.

On the Wednesday evening a public meeting was held, the speakers being Professor Thompson ("Poultry Problems in America"), Mr. Ambrose Keevil ("A Distributor's View of the Egg Trade"), Mr. Dunn-Toon ("It Pays to Advertise"). We hope to give particulars of these papers in next week's issue.

On the Thursday afternoon the delegates spent an interesting time at the Yorkshire Federation Test at Otley. The plant was greatly admired, and it was generally agreed that no single test in the country was better laid out and more favourably situated. The Manager, Mr. Simpson, Mr. Frank Snowden, Mrs. Clay, and members of the committee present were heartily and deservedly congratulated.

NATIONAL POULTRY COUNCIL.

A meeting of the Council was held on Friday morning, the business mainly consisted in the election of committees. The President was in the chair. The secretary stated that the Cosiely Council had, as a result of representations, withdrawn their prohibition as to the keeping of fowls, provided that they were kept under such conditions as would satisfy the Medical Officer of Health. Reference was made as to the responsibility of owners of dogs. Mr. Brown said he had received a very large number of complaints from all over the country. Mr. Ardern said that the only laws which governed birds were the game laws; they could shoot a dog to save the life of a fowl, but it would be difficult to prove.

An accounts committee was elected, consisting of Messrs. Kitson, Street-Porter, Leslie Williams, and Mr. Hamnett.

The National Poultry Diploma Board was re-elected, with the addition of Mr. Tom Newman, the President is ex-officio a member. The names were suggested for the arbitration board, and these were declared elected. Mr. A. T. Walker 22 votes, and Mr. Hamnett 25, were re-elected to the Poultry Advisory Committee.

The following were elected to the Executive Committee:—Mr. Tom Newman 29 votes, Mr. Hamnett 27, Mr. Streeet-Porter 26, Mr. Bostock Smith 25, Mr. Foulkes 24, Mr. Kitson 19, Mr. Barron 18, Mr. Collier 17, Mr. Frank Snowden 15, Mr. Leslie Williams 15, Mr. Brain 13.

The Railway Committee was re-elected, Mr. Williams taking the place of Major Potter.

The Finance Committee was re-elected. Mr. Bostock Smith wishing to retire, Mr. Newman was elected in his place.

YORKSHIRE FEDERATION INTERNATIONAL LAYING TESTS, 1924-25.

First ten positions at end of Ninth Month for cups offered to members of Keighley and District Branch of S.P.B.A. in Class C:—

Section 9.—Light Breeds.—W. Wharton, Keighley (W.L.), 181 eggs; J. & W. Brayshaw, Keighley (W.L.), 172; H. Kershaw, Keighley (W.L.), 170; Wright and Fortune, Keighley (Ex. L), 165; S. Preston, Haworth (W.L.), 147; S. Hartley, Haworth (W.L.), 163; B. Atkinson, Haworth (Bf. L.), 164; W. Thompson, Keighley (Blk. L.), 160; J. Paget, Keighley (W.L.), 143; J. Fisher, Cowling (Blk. L.), 144.

Section 10.—Heavy Breeds.—A. Sawyer, Crosshills (R.I.R.), 165 eggs; H. Downsborough, Bradshaw (W.W.), 191; Mrs. Hawksworth, Pool (W.W.), 169; J. Brown, Glusburn (R.I.R.), 160; H. Downsborough (W.W.), 166; Wright and Fortune, Keighley (W.W.), 139; Miss Taylor, Cullingworth (W.W.), 153; T. Marks, Somerset (L.S.), 160; Mrs. Barber, Cullingworth (W.W.), 156; C. Macaulay, Keighley (R.I.R.), 146.

OUR FRONT COVER.

Mr. R. H. Berney, of Harpenden, has been exceptionally successful in the breeding of highly fecund ducks.

"Daisy," the Champion White Runner, laid 300 eggs in 366 days in the National Test, 1921-22, and 511 eggs in two years.

"Buttercup," another White Runner, was a really wonderful bird, who laid a sequence of 233 eggs in her second year, from October 2nd, 1920, to 20th May, 1925. She has now laid 267 eggs, and is still in lay.

Mr. Berney is a great believer in pedigree, and his stock owes much of its wonderful fecundity to "Lady Knight," who laid 363 eggs in 365 days in a New Zealand Test.

It is one thing, however, to buy pedigree birds and quote another to know how to make the best use of them. At Harpenden they appear to have been used to their full value, judging by the wonderful success the stock has achieved.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, JULY 17th, 1925.

GRAIN AND FEEDING STUFFS.—Small supplies of English wheat continue to attract little attention, but prices are firmer and average fully 12s. 1d. per cwt. Rather more inquiry is reported for foreign wheats, and all quotations have advanced. A quietly steady inquiry is experienced for barleys and prices changes are in sellers' favour, especially for imported descriptions. Only small stocks of English oats are offered and these are nominally the turn dearer. Imported oats continue to move slowly, although the trade is rather better and quotations are a shade higher in some instances. Spot supplies of maize are rather short, and, with more inquiry reported, advanced rates rule, Argentine now averaging 10s. 1d. per cwt., or 2d. more than last week.

Offals generally have a distinctly firmer tendency with more business passing and spot supplies somewhat limited. Meals also meet with rather more inquiry at hardening rates. Trade for oilcakes continues quiet, and lower prices are quoted for prompt delivery of linseeds and cottonseeds.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull, £6 7s; Liverpool, £6 15s; London, £6 12s. Broad Bran: Bristol, £9 5s; Hull, £7 7s; London, £8 5s. Middlings—Fine (Imported): London, £9 2s; Coarse (British): Bristol, £9; Hull, £8 10s; Liverpool, £8 5s; London, £7 17s. Pollards (Imported): Bristol, £7 17s; Hull, £7 5s; Liverpool, £7; London, £7. Rice Bran: Bristol, £7 17s; Liverpool, £7 5s. MEAL.—Barley Meal: Bristol, £12; Hull, £11 10s; London, £12. Maize Meal: Bristol, £12 2s; Hull, £10 13s; Liverpool, £10 17s; London, £11 10s. Maize Meal (S. African): Bristol, £10 10s; Hull, £9 10s; Liverpool, £9 5s; London, £9 10s. Maize Germ Meal: Bristol, £10 15s; Hull, £9 10s; London, £9. Maize Gluten Feed: Bristol, £11; London, £10. Locust Bean Meal: Bristol, £9 15s; Hull, £9 10s; Liverpool, £9 10s; London, £9 15s. Bean Meal: Bristol, £13 15s; Hull, £11 13s; London, £13. Fish Meal: Bristol, £20 10s; Hull, £19; Liverpool, £18 10s; London, £19 10s.

EGGS AND DEAD POULTRY.

Eggs continue a slow business, although supplies are light, he higher prices ruling tending to check demand. All descriptions of dead poultry have been in quiet request and quotations are reduced at London, where more business is reported at he close.

Week-end prices—Eggs (per 120): British, 16s 6d. 14s 0d; rish, 15s 6d, 14s 0d; Danish, 16s 9d, 16s 0d; Dutch, 16s 9d, 16s 0d; French, 14s 6d, 14s 0d; Belgian, 15s 6d, 14s 6d; Italian, 14s 6d, 4s 0d; Lithuanian, 13s 0d, 12s 0d; Russian, 12s 0d, 11s 0d; Chinese, 12s 0d, 11s 0d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish, s 4d, 1s 1d; Others, 1s 6d, 1s 2d. Ducks, 1s 3d, 1s 1d.

EGGS.

Per Doz.—Ashford: First, 2s 2d; Second, 1s 11d. Birmingham: First, 1s 6½d; Second, 1s 5½d. Bridgwater: First, 1s 9d; Second, s 8d. Chelmsford: First, 1s 10¾d; Second, 1s 9½d. Colchester: First, 1s 11½d; Second, 1s 9d. Doncaster: First, 1s 9d; Second, s 8d. Dorchester: First, 1s 9d; Second, 1s 8d. Exeter: First, s 10d. Hereford: First, 1s 7d. King's Lynn: First, 1s 9d; Second, 1s 7d. Llandilo: First, 1s 6d; Second, 1s 5d. Mold: First, s 8d; Second, 1s 7d. Newport (Mon.): First, 1s 9d; Second, 1s 8d. Norwich: First, 1s 8d; Second, 1s 6d. Oswestry: First, 1s 7d. Penzance: First, 1s 6d; Second, 1s 5d. Saffron Walden: First, s 0½d; Second, 1s 8½d. St. Ives (Hunts): First, 1s 9½d; Second, s 8½d. Salisbury: First, 1s 10d; Second, 1s 9d. Skipton: First, s 5d. Truro: First, 1s 4d; Second, 1s 3d. Welshpool: First, s 9d; Second, 1s 6d. *Carlisle: First, 2s 0d. *Derby: First, s 9d. *Ipswich: First, 2s 0d; Second, 1s 6d. *Lincoln: First, s 10d. *Shrewsbury: First, 1s 10d; Second, 1s 8d. *York: First, s 0d; Second, 1s 11d.

FOWLS.

Per lb.—Birmingham: First, 1s 6d; Second, 9d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 4d. Hereford: First, 1s 6d. Llandilo: First, 2s 2d; Second, 2s 0d. Newport Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 5d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 10d; Second, 1s 7d. *Lincoln: First, †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: First, †5s 0d; Second, 4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 6d; Second, 1s 4d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 4d Llandilo: First, 2s 2d; Second, 2s 0d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 2s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, July 22nd, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of " Eggs " to their poultry-keeping friends.

Subscriptions to " EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

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Classified Advertisement Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of " Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

WYE COLLEGE DUCK LAYING TEST. 1924-1925.

Held in conjunction with the N U.P.S. and U.D C., at the South Eastern Agricultural College, Wye, Kent.

Report for the Ninth Period—June 13th to July 10th. 1925.

The total number of eggs laid during this period has been 1,288, giving an average per bird of 8.3 eggs. The total number of eggs laid since the commencement of the test has been 20,751, which gives an average per bird of 134.7 eggs in the 252 days.

Health.—The health of the birds during the month has been good. Moulting is now very prevalent, and has, of course, seriously reduced the egg yield.

Positions.—The leading position in the whole of the test is retained by Miss Harrison Bell's Pen No. 11 (Khaki-Campbells), average to date 187.8 first-grade eggs. The highest individual duck records are as follows:—1st: Miss Harrison Bell's Khaki-Campbell Duck, No. 54, 228; 2nd: Capt. R. A. Long's Khaki-Campbell Duck, No. 5, 223; 3rd: Miss Harrison Bell's Khaki-Campbell Duck, No. 51, 215.

Breed Average to date:—Khaki-Campbells, 148.5; Indian Runners, 129.9; Buff Orpingtons, 104.2; Magpies, 133 2; All the birds, 134 7.

The leading pens in the Breed Sections are:—Khaki-Campbells: 1st, Miss Harrison Bell's Pen No. 11, 939 pts.; 2nd, Capt. R. A. Long's Pen No. 1, 879. **Indian Runners:** 1st, Mr. W. R. Partridge's Pen No. 19 (W), 850; 2nd, Messrs. R. A. and A. M. Johnson's Pen No 13 (W.), 759 **Buff Orpingtons:** 1st, Capt. W. O'G. Cochrane's Pen No. 22, 650; 2nd, Mr. C. C. Chittenden's Pen No 24, 489. **Magpies:** 1st, Mr. C. N. Goode's Pen No. 26 (B. and W.), 670; 2nd, Mr. F. Boothroyd's Pen No. 27 (B. and W.), 568.

EGGS.
FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C., Longwick P.F., Princes Risborough, Bucks. R.I. Reds, White Leghorns. Eggs, Chicks, Stock Birds. List free. Satisfaction insisted on. (See under Ducks and Drakes also).

PULLETS.
FOR SALE.

Captain Strong, R.N., offers Black Leghorn 1925 Pullets and Cockerels; sound in colour, lovely yellow legs.—Apply, Hillerton Poultry Farm, Bow, Devon

White Wyandotte Pullets, four to five months old, bred from hen laying 253 2⅜oz. eggs pullet year; sire from 260 2¼oz. hen. Price, 10s. 6d. each. Few Cockerels, 12s. 6d. each.—Reverend Goodwin Courtman, Awre, Gloucestershire.

Eighty R.I.R. Pullets, January, February, March hatched; sire direct from Boucher's 312-egg hen; 10s. 6d. each. Six R.I R. Pullets, 1924, 7s. 6d. each.—Miss Robertson, Withington Rectory, Glos.

Arthur Leist, Mutts Farm, Denton, Harleston, Norfolk, has 40 lovely 1924 White Leghorn Pullets for disposal at 4s. each, or £3 15s , 20; also 1924 Fawn and White Runner Ducks at 3s. 9d. each, or £3 10s., 20; all carriage paid.

Pullets, this season's hatching, from very fine laying stock. Rhode Island Reds, White Wyandottes, Anconas. Three months old, 7s. 6d. each; older and laying or near laying, 10s. 6d.; very Special, 12s. 6d. — Salter, Kidlington, Oxon.

R.I R., 1925, February-March, from my registered pens; 12s. 6d.—10s. each. Also W. Leghorn Pullets, 1925, March-April; 10s.—7s. 6d. each.—Kemball, Birchanger Lodge, Bishop's Stortford, Herts.

300 Early-hatched Light Sussex, Rhode I. Red, White 'Dottes, and White Leghorn Pullets ,from high fecund trap-nested stock, well grown; price from 8s. 6d. to 15s. Approval.—R. Cooper, Fairbank, Smeeth, near Ashford, Kent.

Light Sussex, bred from hens over 200-egg record, and all eggs used above 2 2-16 ozs. Three months, 7s. 6d.; four months, 9s.; five months, 10s. 6d. From a 251-egg hen, 12s. 6d. each. Guaranteed perfectly healthy. — Reverend Goodwin-Courtman, J.P., Awre, Gloucestershire.

LIGHT SUSSEX.

Pullets, bred from hens (Lister-Own), trapped five generations, with records for year, 180-258; winter, 42-68. Eggs 2-2½ozs. Sire's dams (Lister), year 222-235; winter, 67-74; 2¼oz. February, 15s.—21s.; March, 10s 6d.—15s.; April, 7s. 6d.—10s. 6d., delivered. Approval. — Woolnough and McTurk, S.P.B.A.,

ORWELL P.F., LEVINGTON, IPSWICH.

Pedigree Trap-Nested White Wyandotte Pullets, bred from L2 tested parents.

FIVE MONTHS OLD, 10s. 6d. EACH.
SIX MONTHS OLD, 12s. 6d. EACH.

Sent on three days' approval. Carriage paid.—Bennet and Pike, Poultry Farm, Ashey, I.W.

PURE-BRED BARNEVELDERS.

Few March, April, May Pullets; 21s., 17s., 15s each. March-April Cockerels, 10s. 6d., 12s. 6d. each. Earlier hatched, One to Two Guineas each; 1924 Hens, 15s.—Mrs. Norman Parish (Barnevelder Club), M.S.P.B.A., "Avona," Bramhall, Cheshire. Tel.: Bramhall 58.

LIGHT SUSSEX, WHITE LEGHORN

Pullets, three to six months, from trap-nested stock, with good records; 8s. to 15s.; carriage paid; approval. — Major Disney-Roebuck, Hoo Meavy, Yelverton.

PHILIP CLAPHAM.

My surplus of Cheaper Three Months Pullets is now sold. I have a few to spare from trap-nested hens, by cockerels from H.-A. Gold medal Pen, at 21s., 15s., and 12s. 6d. Send for my free catalogue. — Sherriffs Farm, Lyonshall, Herefordshire.

PULLETS.
FOR SALE.

1925 Pullets, from trap-nested stock many individually pedigreed. Black Leghorns, Light Sussex, February, March, April hatched, from 7s. 6d. to 20s. — Mrs. Coldwell, Spring Grove, Milverton, Somerset

Exceptional Opportunity to secure Large Egg White Wyandottes. Pedigree stock. Pure for rose comb for generations. Few selected individually-bred pullets and cockerels, bred from high record, trap-nested hens, mated to sons of 257-280-egg dams: February and March hatched; from 15s. each. Equal to stock offered at considerably higher prices. Also limited number of 1924 Cockerels and Breeding Hens; full pedigrees.—Mrs Burgess, Woodside, Tenterden, Kent

Great Fransham Poultry Farm, Dereham, Norfolk. First Cross Pullets available; three months old, 5s. 6d.; four months old, 7s. each; carriage paid; cash with order. Money gladly refunded if not amply satisfied.

Rhode Pullets, from hens of over 230 eggs pullet year; all eggs above 2 2-16 ozs. Three months, 7s. 6d.; four months, 9s.; five months, 10s. 6d. Few Pullets, five months old, 12s. 6d. each. The grand dam of these latter laid 1,045 eggs in four years, and was winner of Northern Test. Guaranteed perfectly healthy. — Reverend Goodwin-Courtman, J.P., Awre, Gloucestershire.

LIGHT SUSSEX PULLETS,

January, February and March hatched. from picked Franklynn strain hens, mated to cockerels from Fred Gardner's 1923 Midland Test winners; 10s. 6d. to 15s.; carriage paid on six. — Spencer Jones, M.S.P.B A., Combe Poultry Farm, Little Waltham, Chelmsford.

LIGHT SUSSEX PULLETS,

Bred from Rossall-Sandford-Slade stock; February hatched, from 15s ; March hatched from 10s. 6d.; early April hatched from 8s. 6d.; according to dam's record. Every one individually pedigreed. Satisfaction guaranteed.—A. M. Crosse, Gagle Brook Poultry Farm, Bucknell, Bicester.

Ful-O-Pep Laying Mash
and
Ful-O-Pep Growing Mash

are renowned the world over for producing profitable poultry.

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TRADE **-O-** MARK
PEP

POULTRY MASHES

NO MIXING: NO HEATING WATER: NO TROUBLE

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7s. 6d., 8s. 6d.; carriage paid.—Wood
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Limited number of three months
W.W. and W.L. Pullets; healthy,
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Approval.—Helm, Hade Edge, Holmfir
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Twenty-four Feb. 1925 R.I.R. Pullets,
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**Can spare some Early 1925 hatched P
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through all winter months; make gra
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(fit to show). These are from my b
layers of large brown eggs; good win
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securing two certificates, 1,250 eggs laid
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**We are now booking orders for
Autumn for our early-hatched Pull
Wonderful colour and excellent win
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at November Term compels me to disp
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Foundation Pens mated direct from Fr
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FROM 7s. 6d.

Well-grown birds; large egg strain.
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Wednesday, July 29th, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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Edited by TOM NEWMAN.
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If your pullet egg yield does not average about 200 there is something wrong. Many clients have raised their averages from 150/160 to over 200 eggs. I can ensure that figure without any alteration to your plant. Consult me.

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Typical 60ft. x 15ft. All Purpose Model (Patd. and Regd.) for brooding 800 Chicks in two flocks, or for 250 Pullets.

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EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, JULY 29th, 1925.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

MARKETING.

At the public meeting, held at Harrogate in connection with the National Poultry Parliament, the following letter was read by Mr. Street, who represented the Ministry of Agriculture. It was from a large distributor to an English commercial egg farmer.

There is little need to comment on the contents. As has been previously announced, a Conference on Marketing is to be called by the National Poultry Council.

What one is tempted to ask is of what avail will be this conference unless it is instrumental in setting up legislation, which will penalise heavily any person who will commit such a fraud as this?

Dear Sirs,—We are in receipt of your 20 boxes of English "New Laid" Eggs. The first box we suspected as being light; we opened, and there were 36 eggs short on the second layer. This is no question of pilferage, because the eggs were missing from the second layer, and the box was still properly corded. On examination of these eggs, we find a very heavy percentage of absolutely **stale** eggs, anything from three weeks to a month old. Some even have the appearance of having been through incubators!

It is a great pity that English eggs should be put on the market in this condition, as it absolutely ruins their reputation. In fact, we, who deal with other classes, are sometimes charged with repacking Foreign Eggs or Irish Eggs into boxes and selling them as English New Laid. If we resorted to such a practice, we should certainly give our customers far better, cleaner and fresher eggs than any of these received from you to-day. As a matter of fact, we can sell Danish Eggs at 18s. 6d., because of their supreme quality, cleanliness and selection. This is our second experience of stale English eggs within the last fortnight, and we have arrived at the conclusion that they are very dangerous stuff to deal with at this time of the year. We have infinitely fresher Irish and Danish eggs, the Irish, which are really much better quality, can be sold at 14s. 6d.

We are sorry to have to write in this strain, and we do not say your eggs are any worse than others we have had from that district, but it is a disgrace to English poultry-keepers that they should put such stuff on to the market as "New Laid"!

Yours truly, ——————

SPARROWS.

Last week I had a letter from Mr. Bailey, of Snape, regarding the sparrow pest. Mr. Heathcote Pain writes that he has had exactly the same trouble. Firstly, this year and last year he has gone round, for about three weeks, all the farm buildings, yards, trees, and rose trees, and ruthlessly destroyed all sparrows, nests, eggs and young. Secondly, he has bought a sparrow trap, which cost 8s. 6d. These are splendid things. He places this in any pen, baiting with wheat or mash, and the greatest number he has caught has been 98 in one day. At the present time not many are being caught, as the birds are out in the fields, but as soon as the harvest is done they will return to the trap. The great thing, however, is to always leave one or two in the trap as a decoy, when hauling out the birds to feed the cats. It is also advisable to continually clear the traps. He also catches starlings in this way, and has been fortunate enough to catch two big rats in the trap.

Mr. Alex. J. Bell, writing on the same subject, says:—"In reply to Mr. Bailey's inquiry through your columns regarding the destruction of sparrows, I would advise him to get 'Rats and How to Destroy Them,' by Mark Horell, published by Bale and Dannielsson. It has a chapter about Sparrows, and gives the construction of an excellent trap. It is altogether a very interesting book, dealing with most vermin, and is good reading even to those that are not worried in this way."

THE WELLINGHAM EXPERIMENTS.

Members will remember the feeding experiments at Wellingham this spring with the Light Sussex chicks, which resulted in our getting such excellent results that the cockerels, after a fortnight's trough feeding, and a week's cramming, weighed up to 4½ lbs., when killed and plucked for market, when exactly fourteen weeks old. Miss Malcolm now writes to say that the pullets have commenced to lay at exactly five months from the date the birds were hatched. Many are reddening up; the first egg was a very good one. These birds have had nothing but the same dry mash which was given them as the first feed. Later on we shall give fuller particulars. It is much too early to say anything yet.

The birds in the intensive house appear to feel the heat greatly, but they are laying "gaily" (I am using Miss Malcolm's word). A fuller report will be published later.

Since writing the above I have heard from Miss Malcolm. She says:—"I must write and tell you that Pullet No. 64 of your Feeding Experiment (Light Sussex) got very highly commended at the Sussex County Show. She was up against all the breeds of Sussex, and as her age was only exactly five months on the day of judging, and her weight 5 lbs. 12 ozs., I think this is quite an achievement. To-day she laid a two-ounce egg, and a lot of her sisters are laying merrily. The experimental birds in the Intensive House laid 88 eggs yesterday, which I consider very wonderful—that is 88 eggs from 130 birds under six months."

BROODINESS.

I have been asked this week whether there is any cure for broodiness in White Wyandottes, or if any other method than shutting them up can be adopted. Singular to relate, another letter is to hand from a breeder who wishes to know how he can induce broodiness.

With reference to the first. The great thing is to break the bird directly she exhibits signs of broodiness; shutting them up alone is not sufficient. They should be in a coop with a slatted floor on bricks, so that there is a draught underneath. Do not feed at all for the first 24 hours. As a rule this will break them within two or three days. Of course, one must be careful not to breed from these broodies. There is no doubt that broodiness is highly inheritable.

As regards the second question, as to inducing broodiness. There have been all sorts of means tried, and someone has even sold "broody pills" for the purpose of making hens broody. Also it has been suggested that feeding wholly on maize does so, but my experience is all against this. The only way in which I have succeeded in inducing hens to become broody is to leave the eggs in the nest, and this has met with a fair amount of success, even the Leghorn tribe will become broody if eggs are left in the nest for a few days, and they are allowed to sit on them.

Many drastic remedies have been tried to break broodies, but as a rule these are ineffective. The best results I ever obtained in this direction was shutting them up in a shed with a concrete floor. They were soon glad to perch.

MALPAS UTILITY POULTRY CLUB.

Eighth Report—Twelve Months' Laying Trials, from Nov 1st, 1924.

Egg production during this period has been about normal The Light Breeds have laid very well, but the Heavy Breed Sections have fallen off slightly, owing to broodness. The health of the birds continues satisfactory.

We have had one death, due to peritonitis, caused by a broken egg in the oviduct.

It will be interesting to watch the finish of the six or eight pullets that appear to have a good chance of finishing leader over all sections, as several different breeds are represented amongst the leading birds.

Egg Production of Leading Birds.

White Leghorns.—Mr. Warwick Rogers, 179 pts.; Mr. W. Measures, 155; Mr. C. L. Crosse, 146; Mr C. L. Crosse, 146; Mr. W. Smith, 146; Mrs. H. Baylis, 145.

A. O. V. Light.—Mr. O. Robinson, 166; Mr. W Crump, 156; Mr. C Mallon, 141; Mr. J. R. Milnes, 141; Mr. William Taylor, 134; Miss A. Percifull, 132

White Wyandottes.—Mr. J. Richardson, 177; Mr. J. R. Milnes, 163; Mr. S. Howell, 159; Mr. F. Meredith, 150; Mr. E. J. Stone, 147; Mr. E. J Stone, 142; Mr. A. Snowden, 142; Mr. and Mrs. G. H. Done, 142.

A. O. V. Heavy.—Langford Poultry Farm, 175; Mr. R. Howard, 175; Mr. H. Harold Lloyd, 155; Mr. R. Howard, 155; Mr. P. E. White, 155; Mr. W. H. Robinson, 151.

The Prevention and Cure of Fowl Diphtheria or Bird Pox.

By **Dr. T. VAN HEELSBERGEN.**

Bacteriologist at the Veterinary School of the University of Utrecht.

Abstract from a lecture by Dr. T. van Heelsbergen on "The Combating of Some Important Infectious Diseases of Poultry in Holland," delivered on the occasion of the National Congress (third) for Poultry and Rabbit Breeding at the Hague on January 12-16th, 1925.

This disease appears in various forms: First, yellow diphtheritic membranes on the mucous membranes (mouth, throat, windpipe, eyes, nostrils, ocular sinuses, etc.; second, fowl pox on comb, wattles and skin; third, membranes and fowl pox combined; fourth, moist eczema, especially on the skin of the head; fifth, a chronic form which may be characterised by the absence of fowl pox and membranes, and which is accompanied by emaciation and exhaustion, and the post-mortem appearance of which distinguishes it by a more or less haemorrhagic enteritis, swollen dark red kidneys, and in many cases an atrophy of the heart muscle; sixth, the question has not yet been solved whether the rhinitis infection (contagious nasal catarrh) is a separate disease with a rhinitis virus of its own, or if this disease is nothing but a special symptom of the disease caused by the fowl-pox virus. My opinion is that there are two diseases.

The combating of diphtheria and poultry pox consists of hygienic measures, therapeutic measures and prophylactic inoculations, the latter being either as an emergency inoculation or as a purely preventive inoculation.

Beach was the first to succeed in preventing and curing this disease by the means of inoculation. Beach's method of inoculation is practised chiefly in America, and in a slightly modified form also at the Government Serum Institute in Holland.

In Beach's method the virus is heated for one hour at a temperature of 55 deg. C. The virus becomes so altered that it is possible to produce fowl pox reactions in only a few cases. However, according to Beach's method the addition of 1 per cent. tri cresol renders the virus inactive after a few days (own experiments). This inoculation, however, protects only to a small degree against experimental infection.

This has been proved by the unpublished work of de Blieck and van Heelsbergen. Burnet and Manteufel have not succeeded in producing immunity by killed fowl virus. Since Beach is not satisfied with his killed virus he is now trying to obtain a higher degree of immunity by means of subcutaneous injection of an attenuated living virus. The degree of weakening is obtained by drying, and this is also supposed to protect against experimental infection. In France inoculations have lately been made with living fowl pox virus weakened by the addition of carbolic acid (Pannisset-Verge). Basset advises intramuscular inoculation with a fully potent virus obtained direct from the birds suffering from this disease. In my opinion this is far too dangerous, as the degree of infection does not depend mainly on the virulence of the virus and the method of application, but to a greater extent of causes about which little is known. But the chief objection to this method of inoculation is that, being an emergency inoculation, it can never be applied as a preventive inoculation in the case of healthy flocks.

De Blieck and van Heelsbergen in their experiments on the immunisation against this disease have started out with the idea that, as in the case of human smallpox and animal vaccine, it would be advisable to produce an inflammation on the skin by inoculation, which should remain confined to a small area and yet produce sufficient immunity. The skin plays the main part in bringing about immunity in all varieties of variolous or smallpox disease. In 1922 they succeeded in obtaining these inflammatory reactions with a definite virus, which in reality was not always confined to the same part, yet did not nullify the practical effect of the inoculation, especially in the case of infected flocks, into which the inoculations were made. The local comb inoculation produced complete immunity against experimental and natural infection.

In 1921-1923 about half a million fowls were noculated with this virus (Antidiphtheria) in Holland and Belgium, and according to Prof. Ruppert's communication very favourable results have also been obtained in the Argentine. We ntend shortly to publish a more detailed account of our results. In the autumn of 1923 the direct consequences of the inoculation were, however, ess favourable in the case of some flocks. In hese cases the virus, in conjunction with other actors, such as travelling to laying competitions nd exposure in transit and other debilitating auses, produced a generalisation of the disease n several birds. In all probability the time at which the inoculations were made—viz., the cold utumn months—had a good deal to do with this.

It is to be noted, however, that excellent results vere obtained on other poultry farms with the ame vaccine. Taking advantage of this experince, we have proceeded with our experiments, specially on young and extremely susceptible owls (which had never been exposed to the inection), and we believe that we have succeeded n preparing a vaccine by which it is possible to btain under all conditions a localised inflamation of the skin. Tens of thousands of inoculations have this year (1924) been made with this ttenuated virus. Thousands of these were made nd controlled by us. It was proved that this noculation material is at any time absolutely armless. Egg production is not influenced at ll, or only slightly so. Experiments on hundreds birds in the laboratory have shown that this inoculation material protects against an experimental infection with highly potent virus. The harmlessness and constancy of this inoculation material make it suitable for preventive inoculation on flocks free from disease. This is exactly what the poultry farmer requires.

Since diphtheria and fowl pox generally occur in the autumn and winter months, August or September is the most appropriate time to perform this inoculation. Except inoculation on the comb, the feather-follicle or skin inoculation has of late been successfully performed. In the case of birds with small, dry, anaemic comb, the latter inoculation method is most suitable.

It is advisable to make use of the feather follicle or skin inoculation in flocks already showing signs of the disease, as there is more danger in the case of comb inoculation of spreading from one bird to another the virus from the pock lesion on the comb.

We are now in a position to state the duration of the immunity obtained in consequence of this inoculation material. It has been proved that birds that have been inoculated in August or September or later remain immune until next spring, so the result at which we aimed has been obtained.

"DAILY MAIL" EGG-LAYING TEST OF FIRST-CROSS PULLETS, 1924-25.

Promoted by "The Daily Mail" in co-operation with London and North-Eastern Railway Company. Held at Bentley, Suffolk.

REPORT FOR NINTH MONTH—30th May to 26th June, 1925.

Broodiness was again very prevalent during the 9th month, and 246 birds passed through the broody coops. This combined with the unusually hot weather brought about a further sharp drop in production—the number of eggs recorded falling to 11,161, or 16.18 eggs per bird, from the previous month's total of 12,984—a decrease of. 2.64 eggs per bird.

While signs of moulting were noted in a few pens, these were almost entirely confined to birds just returned from the broody coops, and the large majority continued to be very tight in feather and were particularly bright and active even on the hottest days.

There were a few changes in the positions of the leading pens: Mr. Beattie Wilsons' pen of Black Leghorn X Rhode Island Red moved up in first place in Section 2; Mrs. Walter Crabtree's pen of White Leghorn X White Wyandotte reappeared in the list of leading pens in Section 1; and Mr. Walter Crabtree's White Bresse X White Wyandotte had to give way to Mr. Edward Watkin's Black Leghorn X White Leghorn for 3rd place in Section 3.

Mr. Hugh Sowerby's sex-linked cross, Black Leghorn X Barred Rock, put up the highest score for the month with a total of 155 eggs, and reduced Mr. F. W. Barley's White Leghorn X White Wyandotte lead by 11 eggs, but the latter still has the substantial advantage of 56 points.

There was a further slight reduction in the average size of the eggs, but the percentage of 1st grade still stands as high as 86.76, a very satisfactory figure for the time of the year and in face of the very hot weather, which has far greater effect on size than is generally realised.

The general health of the birds, which has been consistently good from the start was all that could be desired.

J. N. LEIGH.

EGG PRODUCTION OF LEADING PENS.

(Seven Pullets.)

Figures are Eggs and Points to date respectively:—

Section 1.—White Leghorns X White Wyandottes.—F. W. Barley, Kings Norton, 1315, 1289; James M. Abbott, Hoebridge, Old Woking, 1226, 1211; Henry Sutton & Sons, Little Hoole, Preston. 1172, 1155; Walter Crabtree, Twiston, Lancs., 1116, 1106; Mrs. W. Crabtree, Twiston, Lancs., 1104, 1094.

Section 2.—Black Leghorns X Rhode Island Reds.—Wilson Beattie, Rothersthorpe, Northants, 1122, 1111; J. Ashworth, Chorley, 1149, 1099; M. E. & A. Robinson, Bawtry, Yorks, 1120, 1072; P. K. Berry, Market Harboro', 1175, 1053; G. B. Metcalfe, Claydon Farm, Lechlade, 1171, 1000.

Section 3.—Any other First Cross.—Mrs. W. Crabtree, Twiston, Lancs., 1188, 1150; H. D. Barley, Kings Norton, 1216, 1129; Edward Watkins. Cross-in-hand, 1140, 1123; Walter Crabtree, Twiston, Lancs., 1123, 1095; Frank Martin, Culdrose, Helston, 1069, 1021.

Section 4.—Any Cross showing Sex-linked Inheritance.—Hugh Sowerby, Caistor, Lincs., 1277, 1233; P. E. White, Market Drayton, 1165, 998; A. Mansell, Thame, 1122, 985; J. Parkin, Kendal, 1017, 982; R. Charles Hall, Coulsdon, 1040, 967.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

N. G. (Kirkby) writes:—"Could you possibly give me any advice? I have some 400 R.I. Red pullets, January and March hatched. Hatching and rearing have been good; condition now not satisfactory—pale legs, rough plumage, and poor condition generally. The yolks of the eggs of one or two pullets are pale. Could the seven weeks' hot weather be a contributory cause? Many of the droppings are light mustard colour."—There may be many causes; first, and most probable, is overcrowding, either in the houses or on the land. My correspondent should see to this. Such weather as we have been experiencing, unless the birds are very well housed, would cause them to lose condition, either from exposure to sun during day or the house being very hot at night. The feeding, of course, may be at fault, either as to the quality or quantity. Has he sufficient mash hoppers for 400 birds? The state of the excreta indicates that something is wrong; damaged wheat would cause this or excess of animal protein. I suggest he tries the following formula:—2 lbs. bran, 4 good middlings, 1½ S.G.O., 1 maize meal, ½ fish meal or meat and bone meal; and give the birds as much grain as they will consume as the last feed, preferably equal parts good oats and wheat.

F. F. B. (Burnley). The following would be a good formula for your R.I.R. pullets, hatched February and March:—2 lbs. bran, 4 middlings, 1½ Sussex ground oats, ½ maize meal, ½ meat and bone meal. You could alter this to a laying mash by reducing the bran to one lb., and replacing the Sussex ground oats with maize meal, when the pullets come into lay, or at about five months old. In any case it would be advisable to do this at the beginning of September. No, I think the mash which I have given you would be more suitable for the pullets when they come into production in the winter months than the one you are using. In addition to this, during the winter months give them as much grain as they will eat as the last feed, preferably wheat and kibbled maize.

F. S. (Ayr) writes that he is thinking of taking a small poultry farm, and wants to raise 100 White Wyandotte pullets. He wishes to know: (1) Would 300 eggs be sufficient to get 100 pullets— the eggs set under 20 broody hens—and whethe I would recommend him to do this rather thar buy an incubator and brooder accommodation? (2) Whether it is better starting with a breeding pen rather than buying hatching eggs?—say eigh White Wyandottes would lay about four egg daily, 32 eggs weekly, two sittings; an incubato could not be used in this case. The breeding pe could be used for another year. (3) Are chicken stronger and less liable to disease when hatche and reared under broody hens? (4) Would it b advisable to safeguard himself by insurance? H communicated with a certain firm and they in formed him the premium would be 1s. per hea for six months of age against four diseases, Roup Diphtheria, Tuberculosis, and Favus.—In answe to his first question, I do not think he could rel upon 100 pullets from 300 eggs, even if set unde hens. He would have to allow for infertiles breakages, failure of broodies to run the course etc., etc. I calculate that he would want at leas another 100 eggs. He has also to assume that h will always have these broodies at his call at suitable time. In answer to his second questio I think it would be better starting with a goo breeding pen, or rather two, of ten pullets each This would be better than buying eggs even the price he mentions. He would want two inc bators, 100-egg size, two hovers, 100-chick size In answer to his further question, chickens hatche under hens are stronger as a rule than thos hatched in incubators. They are less liable disease, because they are reared in smaller num bers, and brooded under better conditions. Wit regard to insurance, I cannot express an opinio about this. I do not know the firm.

W. S. (Rotherham) writes: "I should be gla if you would, through the medium of 'Eggs answer me the following query. A friend of mi obtained some duck eggs last May and Jun White Runners, very good strain, well known all duck-keepers. He reared six good ducks fro them and one or two drakes. He kept the duc and one drake, and mated them up brother a sister. I advised him to obtain a good unrelat drake, but he never bothered, but said he had been told that in-breeding was **the** thing now. I agreed with him so far, but I said I thought it was a bit too close. Anyhow, this year he gave me half-a-dozen eggs, and hatched out this spring six ducklings which have done well, so that their stamina seems all right. I want him to sell me three of the original ducks so that I can mate them to a good drake, but I do not think he will. The next best thing are the ducks I have. Would it pay me to mate the ducks to a drake (those from the brother-and-sister mating) from a different strain? Could I gradually out-breed the new relationship, and how should I proceed, and would it pay me or would you advise me to leave them alone? Are they worth keeping, or would you advise me to sell them?"—My correspondent has only given me information as to the matings. In the first place there is this old question of "too close." If I understand his letter right, the progeny of this very close relationship are, as far as appearance is concerned, all that can be desired. Under the circumstances I can only advise him to keep them. It does not necessarily follow because the mating was so close that the stamina has suffered. I have to assume that these were bred from really superior individuals, and when that is the case in-breeding does not affect stamina, although it does not improve it. If he will refer to what I had to say on this subject in last week's issue of "Eggs," he will understand. If these ducks are not lacking in size, and are in every respect healthy and vigorous, he might mate them to the drake from the brother-and-sister mating, provided that the drake itself is healthy and vigorous. Usually the first sign of anything going wrong in close-breeding is infertility, followed by poor hatchability. The trouble with in-breeding is that you cannot always judge by external characterstics whether there is anything wrong or not. As to the question of gradually breeding out the new relationship and how he should proceed. He can only proceed by breeding on a single line. If, for example, he continued on the original line for two or three generations he will gradually out-breed the new relationship. As for in-breeding being **the** thing, that is rather nonsense. We have had enough in-breeding with highly-fecund stock, and it cannot be denied that on the whole stock has deteriorated as a consequence.

"Hazelrigg" (Coadby) writes to know if I could advise him as to the best method of getting rid of rats. I think this is pretty nearly equivalent to asking me he best method of curing a cold. Everyone would give him different advice. Possibly the kindest answer I can give him would be that "I wish I knew." He says he has plenty of places where he could put down poison, without actually putting it in the fowl runs and houses. I do not like poison, but the safest poison to use appears to me to be phosphorus. We have ound the most successful trap in a house has been to place a galvanised bin, about 2ft. 6in. high, with a piece of board resting against the top to allow the the rats to find their way in. After filling this three parts with corn, it was gradually reduced, and the rats could not get out again owing to the slippery sides of the bin, and we caught a great number in this way. This I found more effective than any rat traps. Of course, it was necessary to close down all mash hoppers, etc.

"Enquirer" (Rockbourne) has 34 Buff Orpington pullets, hatched 18th February and 10th March, 1924. The average number of eggs per bird per month is not exciting. At the end of June they average 123 each. My correspondent wants to know whether he should breed from them. There must be individuals in this flock which are worth breeding from, but as a whole I should not consider it advisable to do so. Could he not select the best birds, and mate them to a cockerel from a good hen? His present suggestion of mating them with Black Leghorn cockerels I do not like. His 65 Wyandottes did considerably better, and have a very good average of 153. It would be advisable to keep to the same breed for 1926, especially as he had such wonderfully vigorous chicks. The next lot comprised 51 Black Leghorns, and these averaged about the same as the Buff Orpingtons, but their winter record was not good. He wishes to know whether it would be advisable to keep them for another season. Here, again, it is a matter of selection. One cannot advise the scrapping of all the 51 birds. There must be some which, if carefully selected, would well repay him if kept another season. I do not believe in this wholesale scrapping.

J. W. B. (Louth) sends one of the finest samples of Broad Bran I have seen for months, and at 7s. 6d. it is remarkably cheap. Sharps at 10s. are just fair average quality; clover meal at 19s. is extremely dear and inferior. No one should pay such a price as this for clover meal in these days. The maize meal is a good average sample at a fair price. He has some chicks on an earth run ten weeks old. They do not seem to be doing as well as they should do. With regard to feeding, I would advise him to use four parts middlings, 1½ S.G.O., 1 biscuit meal, and ½ meat and bone meal. Scald these and dry off to a crumbly moist condition with bran. Their condition may be due to some other cause than the feeding. Is there any overcrowding, or has the run become foul? Are the chicks infested with insect life? It is, of course, always advisable to consider the feeding when the birds are not doing well, but we should not forget other things, such as crowding, insect life, foul runs, etc., etc

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H. E. B. (Congleton) sends sample of tapioca meal, and asks as to its value. He states that it is advocated in his district in place of S.G.O. He wishes to know whether this will serve in place of S.G.O. for fattening purposes and laying hens. Would I recommend it as a good food for poultry? In the first place, I may say that tapioca meal has been used a great deal as an adulterant of S.G.O. It is very deficient in protein and mineral matter, and the average sample

(Continued at Foot of Column Next Page).

Correspondence.

THE SALE OF EGGS.

Dear Sir,—In connection with Mr. Nance's letter in "Eggs," July 1st, I wish to draw his attention to the fact that the average price of his eggs for the year is about 1s. 8d. per dozen, and not 2s. 3¾d., as he thinks, and the value of the output is nearer £324 than £466 odd. Here is what I consider the correct method of finding the yearly price average, using the results of a flock of early February hatched White Leghorns which have put up a moderate average, if nothing more. I give the flock averages in fractions of one dozen for facility:—

	Flock Average.			Price.		Value.
July	7/12	doz.	@	1/6	=	11/6/12
August	19/12	,,	,,	1/10	=	36/12/-
September	10/12	,,	,,	2/-	=	20/12/-
October	3/12	,,	,,	2/-	=	6/12/-
November	1/12	,,	,,	3/-	=	3/12/-
December	8/12	,,	,,	3/6	=	28/12/-
January	15/12	,,	,,	3/5	=	51/12/-
February	15/12	,,	,,	2/4	=	35/12/-
March	23/12	,,	,,	1/8	=	39/12/-
April	23/12	,,	,,	1/3	=	28/12/-
May	21/12	,,	,,	1/3	=	26/12/-
June	17/12	,,	,,	1/3	=	21/12/-

Multiply both sides by 12:--
162 doz.: = 305/-

Average of 1 doz.: = 305½/162/-
= 1/10 approx.

Thus each hen laid 13 dozen and six eggs.
Value = 25/- approx.

The above laid small eggs till September, which were not very valuable, so that value can be improved upon. Later hatched birds have laid eggs of a greater value in comparison with the period they have been in lay.

If Mr. Nance's food bill is purely for food, it is perhaps reasonable, but has he no freights and odds and ends to pay, which could easily come to a few more pounds a month before a gross profit would be reached? Then his hens are only laying under £1 a year.

Personally, I do not see any net profit at all, or at least very little—certainly not 5s. a hen.

Yours faithfully,
M. GRAY.

SELLING EGGS.

Dear Sir,—As a small poultry farmer I wish to say this:—The corn merchant gets a living out of the poultry farmer; the higgler also gets a living out of the poultry farmer. If the poultry farmer buys his poultry food at retail price, he is cutting his own throat by selling it again (in the shape of an egg) at wholesale price—it is a "mug's" game. A higgler said to me to-day: "There, 14s. 6d. the long hundred" (meaning 120). Here is a man dictating his own terms. Dare I tell the corn merchant that oats or wheat were £8 10s. pe. ton? "I do not think." As a matter of fact the corn merchants called, and also dictated prices to me, and just as dear as ever. The poultry farmer is considered a "mug" by what I can see of it, and if all the poultry farmers allow the higgler to buy his eggs wholesale, the poultry industry will never be any good.

My latest stunt is to scrape enough together to buy an old motor and get retail prices for my eggs, as I am paying retail prices for my poultry foods. I know of several poultry farmers "going broke," but the same old higgler still smiles and finds new "mugs" to earn him a living, while the poultry farmer spends hundreds and thousands and has all the worry. The higgler's outfit costs about a "fiver." I say: Retail prices until we buy our food at Wholesale prices.

Yours truly,
"POULTRY FARMER."

THE EARLY-HATCHED PULLETS.

Dear Mr. Newman,—I see in last week's "Eggs" you invite correspondence re the profitability of the early pullet. By early hatched I mean January or even February. I give no opinion as to the breeding worth of these birds, not having experimented sufficiently, but as to their value as autumn and winter producers of eggs for selling purposes I can speak. I keep White Wyandottes. My original birds came from a well-known breeder who keeps permanently 1,000 layers for commercial purposes, and has an incubating capacity of 3,000 eggs, I think. It is significant, I think, that all his layers are hatched between 1st March and end of March. He does not supply a hatching egg **before** the first date, and personally I have found him right. I have hatched in February. Some of the birds laid in August, all in September, and although magnificent birds would not lay a sizeable egg till 1st October! Although they did not hackle moult, I do not con-

ANSWERS TO QUERIES.—Continued.

contains 11½ per cent. water and 87½ per cent. starch. It is not easily digested, but it is possible that it would be completely absorbed. So far as I am aware, no feeding experiments have been conducted with it with poultry. I should not, however, consider that it would compare in value with S.G.O. Owing to its high starch content, and the great deficiency in both protein and mineral matter, we could hardly advise this as a suitable food for poultry. It may be useful in fattening, but I should not think it a very suitable food for the laying hen.

sider small eggs in September are a paying proposition, considering one has to keep the birds a month longer than is necessary by hatching a month earlier. This year I have pullets hatched beginning of March, pullets hatched end of March and beginning April. The later lots I think the most promising, and I know the earlier all beat me again by laying too early and a small egg.

Except for early table birds, I cannot see the sense of hatching very early in the year. March birds—**well reared**—will, I believe, make as good breeders as January birds, and will cost 2s. per head less to rear. I kill and eat my cockerels at ten weeks old. I don't go in for table chickens, but as long as Austria and Hungary import 2 lb. chickens at 1s. lb., I cannot see much left for us. (I happen to know a man who does this particular trade from Hungary.)

Another item—I find eggs reach their best prices in November. If your early pullet moults, this is where she fails you—and should you not succeed in getting her on again by December all her profit is gone. I reckon my harvest of eggs to be in November and December **invariably;** and I say unless one gets 50 per cent. of eggs in these months, or very nearly, commercial eggs cannot pay. Even in December of last year prices came down with a jump and never recovered. The previous year they held on till January.

Yours very truly,

E. M. WALROND.

Re CO-OPERATION.

Dear Sir,—Recently the Government in their report ave censured the members of Co-operative Societies or not supporting such.

I hold shares—half paid up—in one which was tarted largely with the help of "Eggs," and is dvertised to deal in Poultry Products.

They have several times sent me forms to fill in equiring me to state *all* my private business done uring the previous three months—*what I have sold; here, and to whom, and what price I have obtained.*

When I ask them to give me the same information hey refuse always, even if asked to state what price hey are paying on the day of enquiry.

As a private trader of 30 years' standing, I do not nderstand this, and I think that if this is Co-operaon, the word had better be deleted from the ictionary

I would like to know what my fellow-members of e S.P.B.A. think of this. In so far as I have been ble to obtain any evidence of prices paid by them, it as been much lower than the open market.

Yours truly, No. 158.

Obviously the writer was referring to Co-operative Poultry roducts, Ltd. For this reason we referred his letter to the hairman of Directors. His reply is appended. The forms subitted to us are hardly of such a nature as our correspondent's tter indicates, and we think he must have misinterpreted their eaning and object, the questions being put with the object of scovering whether it would be to the advantage of the enquirer do business with the company, or whether he would do better continue on his present lines. (Editor).

Dear Mr. Newman,—We much appreciate the opportunity of replying to the criticism of your anonymous correspondent.

We presume that the reference is made to the forms which the members have been asked to fill in before sending poultry and eggs, copies of which are enclosed herewith for your inspection. You will hardly imagine that these questions require a member to state "*all* private business done during the past three months," as your correspondent states.

The necessity for asking such questions is self-evident, in that the Society should be in a position to give advice as to whether it is worth while a member sending in produce to the station, or selling through any other source.

To my knowledge no refusal has ever been made to a member sending produce who has asked: "What price they are paying on the day of enquiry?"

The chief criticism of your correspondent appears to be in the last paragraph of his letter. Presuming this refers to prices paid for poultry, it may interest your readers to know that during the two months in which poultry has been received at Virginia Water over 20,000 birds have been dealt with, and it has been a revelation to the management to note the prices which some members have asked for their produce, e.g., many cases can be given where senders have asked up to 4/- per lb live weight!

Not knowing who your anonymous correspondent can be—as errors can be so easily made when numbers only are quoted—we do not attribute the above price to him.

The 20,000 birds dealt with have in a large number of cases been entirely unsuited to the station's work, and the difficulty of fixing prices for birds, before being sent, has been almost insuperable, owing to the fact that no two markets can or do compare. Further, if a sender puts a few of his presumably best birds in a short local market the price realised can hardly be taken as a criterion of the value of the rest of his stock.

All this has given considerable anxiety to the management and in the development of the society's activities this trouble of fixing a price satisfactory to the sender and the station will be automatically solved.

Briefly this development consists of the establishment of a weekly public Auction Mart for both Poultry and Eggs at the Society's premises at Virginia Water.

This auction will be conducted by a well-known firm of Poultry Auctioneers, and will be attended by buyers from all parts.

The first Auction Sale takes place on Thursday, July 23rd, at 10 a.m., and members are invited to see their produce sold.

The Society will buy at the auction all birds suitable for its fattening station, and members will thus receive a competitive price in every instance.

This will be the only purely Poultry and Egg Auction Mart in the kingdom run by Poultry Farmers.

In the Egg Department no eggs will be sold until they have been graded and candled at the Society's Station. What this will mean to the buyer of English Eggs is self-evident.

Further, members are to be given the option of having their eggs sold by contract or by means of the auction.

The establishment of such an auction will benefit the members by:—

(a) Procuring a competitive price for the whole of his produce whether suitable or otherwise for the station's requirements.

(b) Enabling the society to carry out a profitable development.

Yours sincerely,
P. HEDWORTH FOULKES,
Chairman, C.P.P., Ltd.

6th July, 1925.

COST OF FEEDING.

Dear Sir,—Regarding the article by Mr. A. Moreton-Nance, on page 14 of last week's "Eggs," it struck me that the cost of feed for twelve months for 400 layers was exceedingly cheap, and I give you an extract from an American Agricultural College as to what they consider 100 hens require. This would work out considerably dearer **—£17 for 12 months.**

> "Connecticut Agricultural College puts out the following table to serve as a guide in estimating the probable cost of maintaining a flock of poultry. It shows the approximate average amount of feed and litter for one hundred hens for one year:—
>
> Two tons scratch grain.
> Two tons dry mash.
> One ton mangel beets.
> One ton straw and litter.
> 100 lbs. grit and shell.
>
> The one hundred hens should yield one ton of eggs. This means 16,000, at an average weight of two ounces each."

Yours faithfully,
V. CLUZET.

CORRUGATED IRON ROOFS.

Dear Mr. Newman,—I see in my copy of "Eggs," just to hand, that the opinion of members is requested regarding the use of corrugated iron for roofs of poultry houses, and it was mooted that they were too hot in summer and too cold in winter, and that on the whole they were just as liable to be lifted by wind as a felt and board roof.

Well, perhaps it may interest you and my fellow members to know that here in Sierra Leone nearly all the roofs of permanent buildings (living houses, etc.) are covered with corrugated iron, but the roofs are first covered with stout boards (about one inch thick). These roofs, on the whole, stand against the fiercest tornados which rise suddenly and last anything from half to two or three hours. Very few cases have occurred where the roofs have been lifted, and in all cases the houses or huts have been in exposed situations on the side of high hills, some three to eight hundred feet above sea level, and in most cases the ravages of white ants were partly responsible. Then, again, all houses have wide verandah roofs, which form "pockets" for the wind and afford tremendous leverage.

Out here the general form of ventilation is at the ridge of the roof, and by windows and slatted ventilators in the walls. When fine, we are able to have windows wide open on both sides without undue draught, closing either side when the wind rises according to its direction, and when in wet weather, such as we are experiencing frequently just now, it is unsafe owing to dampness, to have either window open, we get a fair current of air by means of the side ventilators.

I may add that for appearances sake the roofs are also lined under the rafters, so that there is first iron, then one inch boards, then a space of from three to seven inches, according to the depth of the rafters, and then a lining of matchboards about three-quarter inch thick. Of course, this is for living houses or huts. Some are lined as ceilings instead, and would not be advisable or necessary in the case of poultry houses, but at least one thickness of boards would be necessary under the corrugated iron, and I am inclined to think that if there was a space between the two it would be better for summer and winter by counteracting either heat or cold.

To prevent the iron from lifting with the wind, it must of course be securely fixed either with bolts or screws. We use large galvanised screws out here.

In this country we get, on an average, 150 inches of rain per annum, and mostly between April and November. So far we have had 17.24 inches for 1925, so that you can see we have some to look forward to.

The only roof I have **seen** lifted by storm was **one side** of a span roof of a hut measuring 60 feet by 25 feet with a balcony roof addition of 6 feet. The whole of this "side," woodwork and all, was lifted bodily and carried over a higher building for about 100 yards, and struck another building, smashed its verandah and staircase of iron and wood. The weight is estimated at about three tons.

Of course, this was an exceptional case, and was partly due to the ravages of white ants in the woodwork. But it does show that, on the whole, galvanised corrugated iron roofing is capable, if properly fixed, to withstand almost any weather, but I should imagine that "costs" would be against its use.

I am afraid I have made a long yarn of such a small job, but perhaps you will be able to sort it out and use some of it for the benefit of others.

Yours faithfully,
F. S. PARTRIDGE.

Editorial.

ON EGGS.

One of the most unpleasant tasks which falls to the lot of the Secretary of a Poultry Association is that of examining all those eggs which are sent him because some customer of the sender has complained that they were "bad eggs." The sender is usually very indignant, and protests that his eggs are collected every day, therefore it is impossible for them to be bad.

THE EFFECT OF BODY HEAT ON EGGS.

One of the most common of these is the egg which has been retained in the oviduct for some long period. As our readers are aware, the egg is forced from the oviduct by the peristaltic action of the muscles in the oviduct wall; sometimes from fright, sometimes probably from the bird being in an overfat condition; and again, possibly through the weakening of the muscles of the oviduct from over-production, this action ceases temporarily, and the egg is held in the body of the fowl for several days after its completion. This keeps the egg at body temperature, and incubation begins. If the egg is fertile the results are disastrous at once. If it is infertile the egg is certainly affected, so the indignant customer and the indignant vendor.

FOREIGN SUBSTANCES IN THE YOLK.

Occasionally grains or fragments of other foreign substances may be forced up the oviduct from the cloaca. We once had a Nottingham reader whose wife found a halfpenny in the albumen of an egg.

During the normal return of such substances the oviduct glands have secreted albumen, shell membranes, and shell, forming a complete egg, which explains the presence of the foreign substance within the egg.

Intestinal worms are sometimes found in eggs. They apparently gain access to the oviduct from the large intestine, and are later included in an egg as it is being formed.

BLOOD SPOTS.

We have often explained this. When a hen is laying heavily the ovary is plentifully supplied with blood to promote the rapid formation of yolks. When a yolk sac ruptures to release a yolk, some blood may escape from a congested blood vessel in the sac. The blood passes into the oviduct with the yolk, where it becomes surrounded by albumen and incorporated in the egg. Sometimes the blood-spot is in the white, or albumen. In that case it is due to a ruptured blood vessel in the oviduct.

THE GERMINAL DISC.

Some yolks show many more than one germinal disc, and we have frequently eggs sent to us asking, "What is the foreign substance in the egg?" In some cases it has been suggested that the hen is tubercular; this is not the case. Only one of these discs usually shows development, when the egg is incubated.

EGGS WITHIN EGGS.

On five or six occasions we have had these sent to us, and the only explanation we can find of this is, that when an egg is being passed through the oviduct and is ready to be laid there may be some reverse peristaltic action, and the egg will be forced up the oviduct until it is again normally pushed along its regular course; in this way one yolk may be developed with two complete sets of albumen, shell membrane, and shell.

As a rule these eggs within the eggs are very small, weighing not more than ¾ oz., but some two years ago we had a Leghorn egg sent us weighing five ounces, which contained another complete egg weighing two ounces.

MEAT SPOTS.

Occasionally eggs containing what the sender describes as "meat spots" are sent. More frequently than not this is congealed blood. The opinion has been expressed that they may be pieces of the dead glands of the oviduct wall.

BLOOD IN THE ALBUMEN.

Often the albumen has the appearance of blood or blood streaks in it. This is due to the oviduct being injured or irritated, so that blood is exuded with the albumen.

Eggs of this kind are more common with pullets just beginning to lay, or during a heavy laying period, than at other times.

Only a few individual birds in a flock are affected, and therefore treatment is almost impossible, as it is difficult to recognise which individuals are responsible.

TEMPERATURE.

The effect of heat on eggs will, of course, depend largely on whether they are fertile or not. The lowest temperature at which the germ of a fertile egg will begin to develop is 72 degrees Fahrenheit.

THE WYE COLLEGE DUCK TEST, 1925-26.

Particulars and rules have been received from the Secretary of the South-Eastern Agricultural College, Wye, Kent.

Each entry consists of five ducks of any one pure breed, hatched not earlier than 1st January, 1925. Ducks are to be trapnested, and run on free range. Feeding to be done in the traps.

A fortnight's settling down period is to be allowed between the time of arrival on the 15th October, and 1st November, on which date recording will begin.

The entrance fee is £2 10s. for five birds, and is payable in advance.

There will be a ballot should more entries be received than can be accommodated.

For the purpose of awards, the birds will be divided into four classes—Runner, Khaki-Campbells, Buff Orpingtons, and any other variety or breed.

Scoring.—First grade eggs shall throughout the test be those which weigh two ounces or more.

In the event of the death of any duck, the egg record of any such duck will be retained in the pen record, but the duck may not be replaced.

Entries close on 1st September, 1925.

"LEICESTER MERCURY" COUNTY LAYING TRIALS.

Officially supervised by the Leicestershire County Council—Agricultural Education (Joint) Committee. Horticultural Sub-Committee.

10th Monthly Report for the period June 15th to July 13th, 1925.

In the report for the above period Mr. W. Rolling states that there has been a further drop in the output of eggs during the month, this is due to the seasonal falling off and in part to the hot weather recently experienced, which always affects egg production. Broodiness is still prevalent, and some few birds have commenced to moult. 1,598 eggs were laid during the four weeks, against 1,871 for the previous month, giving an average of 14.2 eggs per bird. The total for the ten months (40 weeks) is now 18,314 eggs, being an average of 163.5 for all birds in the competition. Practically no change in position has taken place during the month. The best performance for the month was made by Mr. E. Hill's pen of R.I. Reds, which laid 113 eggs, value 14/11. This is followed by Mrs. R. Crawford's pen of White Leghorns, which laid 106 eggs, value 14/3½. The health of all birds continues to be good with no case of infectious disease. One death occurred in Pen 3, the report from the Veterinary Laboratory of the Minister of Agriculture gave "Leukemia" as the cause of death.

The position of each pen is given below:—

Section 1.—Division A.—Light Breeds (6 birds).—Mrs. R. Crawford (W.L.), 1097 eggs; Crawford and Dowell (W.L.), 965; J. and A. Moore (Blk. L.), 844; Alan Kemp (Blk. L.), 765.

Section 1.—Division B.—Heavy Breeds (6 birds).—T. F. Wildman (R.I.R.), 1220; Mrs. E. Ball (R.I.R.), 1084; Crawford and Dowell (R.I.R.), 1123; Lady Dorothy Fraser (R.I.R.), 1090; Miss G. Belgrove (R.I.R.), 1024; C. B. Payne (R.I.R.), 1032.

Section 2.—Any Breed (2 birds).—J. T. Kidger (W.W.). 407; Geo. Gilliver (W.W.), 366; Geo. Stevens (An.), 378; Miss D. Walton (W.L.), 329; Mrs. Geo. Gilliver (R.I.R.), 258.

H. T. ATKINSON,
County Instructor in Poultry-Keeping.

CHESHIRE COUNTY COUNCIL EGG-LAYING COMPETITION SINGLE BIRD TEST, 1924-25.

Report for Ninth Month—May 27th to June 23rd, 1925.

The flock average for the month is 16.25 eggs per bird, against 18.4 last month. The average for the light breeds is 19.4, and for the heavy breeds 13.6 per bird.

Twenty-nine birds have been broody.

Two deaths occurred this month.

EGG PRODUCTION OF LEADING PENS.

Light Breeds.—W J. Fletcher (W.L.), 1449 pts.; J. Mason (W.L.), 1434; E. Harrison (W.L.), 1375; Campbell Sheen (W.L.), 1340; W. J. Fletcher (W.L.), 1293; A J. Milne (W.L.), 1264.

Heavy Breeds.—Liverpool Sanatorium, K'wood (L.S.). 1387; Mrs. Garnett (Buff R.), 1351; W. T. Griffiths (W W.), 1340; Tansey Bros (R.I.R.), 1310; E. Carter (R.I.R.), 1289; E Paterson (B. Orp.), 1241

BOARD OF AGRICULTURE FOR SCOTLAND.
EGG-LAYING TEST, 1924-25.

Egg Production of Leading Pens at end of Ninth Period—23rd June, 1925.

Figures are Eggs and Points respectively.

Section 1. White Leghorns.—D. Baxter, Lanark, 1010, 1007; J. Prentice, Uddingston, 1026, 968; J. W Dobbie, Rothesay, 1001, 880.

Section 2. White Wyandottes.—R. A. Oliver, Boarhills, Fife, 925, 882: W. Bradbury, Tottington, 957, 729.

Section 3. Rhode Island Reds.—Mrs. Logan, West Kilbride, 1005, 1003; H. P. Roche, Stevenston, 916, 909.

Section 4. Non-Sitters other than White Leghorns.—R. Scott Miller, Uddingston, 903, 883; Jackson and Johnstone, Stonehouse, 854, 852.

Section 5. Sitters other than in Section 2 and 3.—J. Adams, Lanarkshire, 865, 864; Mrs. I. Craig, Dunlop, 779, 779.

Section 6. Ducks.—H. S. Godsmark, Ashford, Kent, 1109, 1061; S .E S. Burnett, Arbroath, 856, 850; R. A. and A. M. Johnson, Chalford, Stroud. 851, 850.

Angora Rabbit Wool Farming—VII.

By the LADY RACHEL BYNG.

FEEDING (*Continued.*)

Green food is one of the most economical foods of rabbits' menu, and plays an important part in the supplying of a good harvest of wool.

(1) It must be fed dry. Some breeders maintain that it is fussy to be particular on this point, and contend they feed wet greens with impunity. Possibly it may be harmless if fed immediately after a shower of rain, but, personally, I have found that scour is the result of feeding wet greens.

(2) It must never be fed frosted. Frosted greens or roots are fatal. In winter it is best and safest to leave all greens and roots to thaw for 12 hours in a warm temperature before feeding, to ensure all frost being drawn out of them.

Babies of 5 weeks old with their Mother and Father—bred b Lady R. Byng.

(3) Never feed greens or roots with earth upon them. Earth is indigestible, and sure to cause liver trouble. Among the most valuable green foods are the ordinary weeds found in a garden. Weeds that are the gardener's despair rejoice the heart of the Rabbit Farmer, hence gardening and rabbit keeping go well together.

Who does not know the persistence of groundsel t grow in the kitchen and flower garden beds? Weeding loses much of its wearisomeness when the weeds ar going to be utilised in assisting the growth of wool a 35s. per lb.

GROUNDSEL is excellent for this purpose. So, too is the maddening "PLANTAIN," both the broad an narrow-leaved kinds.

How difficult is to keep down convolvulus when onc it has set root amongst one's raspberry canes. Th rabbits relish convolvulus, both leaves and flowers.

CHICKWEED that spreads with such amazing swift ness everywhere, is another rabbit treat. COLTSFOO flower and leaves are much appreciated. HOGWEE that grows in such profusion in most country copse and hedges, though not enjoyed as much as the abov by Angoras, forms a very useful "pis-aller." BRAMBLES they love. LAWN MOWINGS make a change, but one must make sure that they contain no buttercup (deadly poison!) or machine oil.

In addition to weeds there is wonderful feeding property in the ordinary garden waste. Loose leaves of cauliflowers, stalks split in two or three, are great favourites PEA-PODS and PEA-HAULMS are thoroughly relished. BEAN-HAULMS are not liked as much, and bean pods are too tough.

BRUSSEL SPROUTS, leaves and stalks are always liked. Leaves of turnips, turnips, celery leaves, raddish leaves, are all good feeding. As for CARROTS AND THEIR LEAVES, there is nothing better for wool production

CLOVER is one of the best of foods, flowers and leaves, too.

DANDELIONS AND LEAVES are never refused. They should not be fed too generously, as they act as an aperient.

SHEPHERD'S PURSE is another favourite, and is invaluable as a deterrent to scour.

The leaves and stalks of Jerusalem artichokes are a great stand-by. Parsley in small quantities is useful, especially for bringing backward does in season. Holly leaves they like, and especially do they enjoy twigs of hazel and beech and hawthorn. SUNFLOWERS, flowers, leaves, stalks, and seeds can all be utilised. The latter should be crushed before using. These are easily grown, and it is a good plan to have a succession of plants during the whole summer—Acacia, Lime, Maple, Sowthistle, Thyme, Sage, Fennell—all help with the green menu.

BEETROOT can be fed sparingly, and French farmers advocate it, being mixed with bran before feeding to young stock to prevent scour. Apple parings and core, as well as the fruit itself, is looked upon as a great treat, also pears.

The following must be avoided:—Pimpernels, primroses, buttercups, ranunculus, meadow saffron, anemonies, wild mustard, tansey, aconite, uncooked potatoes, potato leaves, rhubarb leaves, aspen and oak leaves.

HARPER-ADAMS' AGRICULTURAL COLLEGE, NEWPORT, SALOP

POULTRY LAYING TRIALS, 1924-25.

Report for the Ninth Period.

The records for the ninth period, which terminated on 10th July, disclose the usual decline in production, the average output for all competing birds being just under 15 eggs per bird. This figure is satisfactory, although less by one egg than that attained for the corresponding period last year. The decline is noticeable among the heavier breeds, broodiness having materially affected production. The difference in output of the light and heavy breeds is interesting, a comparison of the respective averages showing that in the Light Breed Section of the Championship 162 eggs per pen (10 birds) was reached, the Heavy Section recording 138 eggs per pen. In the Small Flock the White Leghorns gave an average of 90 eggs per pen (six birds), comparing favourably with the Wyandotte average of 84 eggs.

SUMMARY OF THE LEADING PENS.

Championship Trials.

Section 1. Light Breeds.—A. White, Malpas, Cheshire (B.L.), 1681 eggs; Miss N H. Bell, Ightham. Kent (W.L.), 1679; Frank Snowden, Keighley. York (W.L.), 1583; H. Sutton and Sons, Preston (W.L), 1604; G. B. Metcalfe, Lechlade, Glos. (B.L.), 1577.

Section 2. Heavy Breeds.—E. Watson, Colne, Lancs. (W.W.), 1663; G. B Metcalfe, Lechlade, Glos. (W.W.), 1657; W. Lister, Northiam. Sussex (L.S), 1585; Miss N. Fowler, Blackburn (W.W.), 1777; G W. Reeves, Whitchurch, Salop (R.I.R.), 1602.

Small Flock Trials.

Section 1. White Leghorns. — W. McMahon, Newton Mearns, Renf., 1113; J. and W. Purdie, Lanark, 1088. F A. Welch, Cheltenham, 1064; Cotswold Pedigree Farm, Stroud, Glos., 1095; G. Keith Simmons, Honiton, Devon, 997.

(Continued at Foot of Next Column).

POST-MORTEMS.

B. W. The post-mortem examination of the Chinchilla rabbit showed that it was affected with Coccidiosis. This is a very common cause of loss in young rabbits, at times assuming the proportions of an epidemic. It is caused by an organism belonging to the same family as that which affects chicken, but differs somewhat in the life history and in shape. The disease is spread by the droppings of infected animals, adults often being carriers of the organisms, without being affected in any way themselves. For this reason adults should be separated from the young ones as soon as possible after weaning, and a great deal in the way of prevention can be done by cleaning out the hutches every other day. When the disease has actually appeared, the floors of the hutches should be cleaned by scrubbing with hot water and soda, and then disinfected every other day, and every care taken to prevent contamination of the food or water by the droppings. All green food should be fresh, but allowed to wilt, before being fed, as, as a matter of practical experience, this trouble is less likely to arise if this is done. As treatment, give ten drops of Tincture of Catechu in a teaspoonful of water twice daily.

D. & L. The post-mortem examination of the duckling showed that the cause was some irritant poison, the lesions being very suggestive of lead. I suppose the usual collection of old pots and tins was found when the pond was drained, and it would be interesting to know if there were any old paint pots among them. There was nothing to suggest infectious disease, and the pond should be safe to use again when thoroughly cleaned out, provided that no poisonous matters drain into it.

Section 2. White Wyandottes.—D. W. Gunston, Reading, 1145; Allen Bros., Harrogate, 1034; Frank Snowden, Keighley, Yorks., 1007; Dr. A E Harrisson, Daventry, 1003; Mrs. Alec Wilson, Garth, Breconshire, 992.

Section 3. Rhode Island Reds.—F. and A. H. Sanders, Rugby, 1044; Mrs. Molloy, Crumlin, Co. Antrim, 1034; Dashwood Farms, Ltd, Doddington, Oxon, 950; R. Green, Preston, Lancs., 963: E. Leslie Pattison, Longton, Staffs, 915.

Section 4. Sussex.—F. Rossall-Sandford, Shrewsbury, 919; W. Bradbury, Bury, Lancs., 929; Capt. A. A. Plimpton, Beverley, Yorks, 966; A. Hughes, Malpas, Cheshire, 926; A. Robinson, Bawtry, Yorks., 947

Section 5. Black Leghorns.—W. A Lansley, Whitchurch, Salop, 951; C. L. and J. A. Thomson, Holywell. 960; Mrs. H. B. Cowley, Abingdon, Berks., 910; Wilson Beattie, Rothersthorpe, Northants, 896; J. H. Hodkinson, St. Ives, Hunts, 872.

Section 6. Any Other Light Breed.—Storer Bros, Didsbury, Manchester (An.), 880; H. Lyndon Lemon, Devizes (La. B.), 890; S Street-Porter, Ely, Cambs. (An.), 904; W. Hamnett, Blackpool (An.), 883: C.W S., Whalley, Lancs., (An.), 868.

Section 7. Any Other Heavy Breed.—Miss P. Mills, Bishop's Castle, Shropshire, 1034; F. R. Welch, Bewdley, Worcs. (Rs.), 927; O. C. Brown, Scunthorpe, Lincs. (Rs.), 970; Miss M. Fowler, Blackburn (B. Orp). 846; P. E. White, Market Drayton (Rs.), 896.

SINGLE BIRD TRIALS.

Section 1. White Leghorns.—W. Hamnett, Blackpool, 206; W. H. Golden, Leire, Rugby, 201; S. E. Illingworth, Bradford, 196; N. S Robinson, Spilsby, Lincs., 188; F. S. Low, Godstone, Surrey, 189.

Section 2. White Wyandottes.—Mrs. Alec Wilson, Breconshire, 213; A. Hughes, Malpas, Cheshire, 187; S. Street-Porter, Ely, Cambs., 182; S. and T. Greenall, Grantham, 182; W. Barron, Preston. 186

Section 3. Any Other Light Breed.—S. Street-Porter, Ely. Cambs (B L.), 178; A. White, Malpas, Ches. (B.L.), 175; R. A. and A. M. Johnson, Chalford, Glos. (B.L), 176; Chivers and Sons, Ltd., Cambridge (B.L.), 173; W. Hamnett, Blackpool (An.), 157.

Section 4. Any Other Heavy Breed.—T. Barron, Preston, Lancs (R.I.R.), 181; R. Green, Preston (R.I.R.), 181; W. M. Golden, Rugby (L.S), 170; A. White, Malpas, Cheshire (L S.), 171; E. Leslie Pattison, Longton, Staffs (R.I.R.), 155.

THE

Effect of Nervous Strain
Upon Egg Production.
By **BERNARD REDDAWAY.**

Slowly we are meeting and overcoming the obstacles which beset the path of high production and reproduction in poultry, but as yet there are one or two paths along which we have hardly travelled at all.

The effect that worry and nervous strain have upon the physique of man is well known, and we have no reason to doubt that this detrimental effect is common to a greater or lesser extent in all creatures possessing our type of controlling brain. The lower forms of life which have a number of distinct nerve cells in place of a central brain come in an entirely different category.

Long before a fowl's or duck's body is apparently damaged by fright or worry the egg yield falls off, and it is this falling off which is usually the only outward sign of nervous disturbance.

An extreme case is the fright a fierce dog will give to a pen of laying Leghorns; a fright of this kind is sometimes sufficient not only to stop egg production but also to throw some of the birds into a moult.

Now I am going to give the results that I have observed of the effect that the less-heeded worries, which so often beset the fowl, have upon her egg production.

Pens of laying birds undoubtedly go off in production if rats or even mice are allowed to enter their sleeping house. Having a dropping board under their perches which prevents them from seeing the rodents in no way alters the effect to their egg production which the rats cause. We are thus drawn to conclude that the noise made by the intruders, as they run in the litter, cause the birds to cease laying properly, owing to disturbing their sleep, and causing them nervous irritation.

Again leaving out the disturbances caused by animals, we find that a banging door or a rattling chain have just the same effect upon their laying.

We also find that the fertility is reduced even when the actual egg yield is hardly affected at all.

Of late a good deal has been written about the suitability of the iron roof for poultry houses. The objection raised to this type of roof is the extremes of heat which it allows the house to go to. In large houses the iron roof does not cause the house to go to extremes of temperature, but the egg yield is still affected, so we must put it down to something else. Perhaps the noise which the rain makes as it beats down on to the iron has a lot to do with it.

Some persons argue that the fowl's brain is of such a low order that it is incapable of worry as we speak of it, but I advise them to go and look at the worried expression to be found in the eyes of birds exposed to these petty annoyances, before deciding that poultry are incapable of worry.

We should take more care in providing for the nervous welfare of our birds, and we should look upon them less as egg machines, which, by-the-way, they are not if they are not quite properly looked after.

It is so little trouble to see that there are no unfastened chains or loose doors and shutters to bang, and make a noise all through the night whenever the wind blows. All rodents should, of course, be excluded from the poultry houses.

CORRESPONDENCE—Continued.

NATIONAL POULTRY PARLIAMENT—THE BUSINESS MAN'S VIEW.

Sir,—Surely most business men would share the astonishment I felt when attending, as a visitor, the National Poultry Parliament, held at Harrogate last week, upon seeing a speaker mount the platform, and deliver to the public a clear statement to prove how he by losing thousands of fowls was a failure as a Poultry Farmer, and his effort to gain favourable sentiment in the endeavour to place responsibility upon representatives of the Ministry of Agriculture.

I am led to believe this will come under "industrial inefficiency," one of the main difficulties of the National Poultry Council, and that which causes the organised work of the Poultry Commissioner and his assistants to be so laborious and ineffective.

A. REG. WALMSLEY.

We think that very few of those who were present and heard Mr. Toovey speak will agree with Mr. Walmsley in what he has said. Mr. Toovey could have had no object in attempting to gain favourable sentiment. He made a plain statement of his case without passion, and without elaboration, and certainly, as far as we could discover, made no endeavour to place the responsibility upon representatives of the Ministry of Agriculture. His statement was of importance, as it focussed attention upon the fact that we in this country are not in a position at the present time to fight a serious outbreak of roup, and Mr. Toovey was endeavouring, as we understood him, to demonstrate this as it affects the industry as a whole, and not his own particular case.—(Editor).

DISEASE AND LARGE UNITS.

Dear Sir,—Reference to the letter from H. L. S. in your issue of the 15th inst. I do not think that anybody now doubts that small units give better percentage results (excluding finance), but it is equally certain that the large unit gives by far the better financial result. I am referring, of course, to Commercial Egg Farms, not to Pedigree Breeders. This is due primarily to the saving in labour costs.

H. L. S. mentions a certain six per cent. return, and a doubtful 33 1/3 per cent. In my opinion, a well-organised Egg Farm, run on business lines, can yield higher than this last figure. But it must be the right size—say 2,500 birds, for example.

I do not quite agree with Mr. Morrison on this point. I think it possible for an egg farm to become too big, and that the return on capital invested will then decrease.

H. L. S. mentions risks. Are the risks really greater than in many other totally different kinds of business? I do not think they are. Do not the large linen drapers, for example, run continually heavy risks of their buyers laying in large stocks of an article which the public may refuse to touch? Or a manufacturer may, at great expense, put an article on the market, only to have it rendered useless in a year's time by a far superior invention?

We could probably find many more examples of risks just as great as those of Egg Farming.

Whilst on the subject of Egg Farming finance, I should like to mention a few other points. I am continually meeting poultry-keepers who sell their eggs on the basis of taking the first price offered. They never seem to think of saying: "These eggs are one or two days old (as the case may be); I want so much for them," and refusing to accept a lower figure. It is my experience that people realise very quickly when they are purchasing a *good* article, and that they are willing to pay for it. But the Eating Egg, like other articles in this Commercial Age, must be "boosted."

Again, I believe that many poultry-keepers spend far more on their advertisements of stock, etc., than s warranted by their turnover. I do not think they work out how much they must sell before ever paying the cost of the advertisements, apart from making a profit.

Lastly, does it pay to sell two months old, first-class, bred-to-lay pullets at about six shillings? I emphatically think not. You, Sir, I believe, voiced the same opinion some time back.

Apart from the cost of rearing to laying age (a most debatable point, because we have not yet decided at what stage we start counting the cost), do the sellers estimate how much greater profit they would make if they kept these *good* pullets on their own farms?

A first-class high fecund pullet is worth not less than 5s., in my opinion, and this is where we want a little more *combination*, as distinct from *co-operation*.

Yours faithfully,

A. COLOMB, F.Z.S.

COMMERCIAL EGG FARMING.

Dear Sir,—For about three years I have been working t Commercial Egg Farming. I have carefully refrained from writing on the subject in any way, firstly, n principle; and, secondly, probably for the same reason given by Mr. Lester Spurgeon in his letter in uly 8th number of "Eggs," every word of which I gree with. I cannot, however, agree with one or two ther remarks in this issue by the gentleman who uotes the "Expert" who makes a profit of 15s. a head n Commercial Egg Farming. He may be an expert, ut not an authority in Commercial Egg Farming. If ou make from 6s. to 9s. a bird, you will be doing uite well—that is to say in Commercial Egg Farming, ure and simple—no pupils or sales of hatching eggs, tc.

The other point I do not quite agree with was what our correspondent, Mr. Pinkney, said on disease. I gree with most of the things he says. My experience as been much the same as his, but I am getting more nd more convinced that humans, animals, and birds l carry in their bodies the germs of all disease, and only needs the necessary favourable or rather *nfavourable* circumstances to produce the disease, and ese unfavourable circumstances are produced frequently in late hatching. I have noticed in the early hatches no signs of any disease, yet a hatch at the beginning of May (White Leghorns) from exactly the same stock, the birds have appeared quite fit and well, but at three weeks to six weeks (during the feathering) they will have developed Coccidiosis. I put it down entirely to the germ of the latter hatch being weak, and this germ being weak, has produced the disease, which probably, as suggested by Mr. Pinkney, is the prevailing adverse germ in the birds at the time, or which germ is brought from an outside source (wild birds), and developed in the later-hatched birds because of this weakness.

The feeding in all hatches was the same, mostly your mashes; in any case it was the same for all. I am getting convinced now that it is better to go short of pullets than hatch out after the latter part of April. Perhaps it can be done on a small scale. I am certain that it cannot be on a large scale. At any rate this has been my experience. Perhaps other commercial egg farmers of wide experience will give some of their views on the matter.

Yours faithfully,

AEROPLANES AND POULTRY FARMERS.

Dear Sir,—I would be pleased to know, through the columns of your paper, if others have experienced the disastrous effect of aeroplanes flying low over their farms.

Recently I had a flock of 280 Khaki-Campbell ducks in two flocks of 140 each terribly frightened by a machine flying low over my duck pens. My egg yield of 240 a day was completely stopped in three days by this cause. High-bred pedigree ducks are naturally nervous creatures, and it is pitiful to see these birds flying and lashing themselves against the enclosures, to try and escape the view of aeroplanes.

Financially it is a very serious loss, as 20 dozen eggs realise £2 a day, and as these ducks stopped laying for a month the loss was at least £70 in commercial eggs alone.

With food prices so high as at present, such an experience must spell disaster to a small farmer running a flock of ducks for egg production. If other breeders have had such experiences I would be pleased to hear of same through the valuable medium of your paper, so that perhaps the National Poultry Council or the Minister of Agriculture may be approached with a view to try and prevent machines flying at a low altitude over poultry farms.

Awaiting to hear the experiences of others, who I trust have been more fortunate than myself.

I remain, yours faithfully,

P.C., N.U.P.S.

APEX HOUSES.

Sir,—In case I should be regarded as guilty—in however large or small a measure—of encouraging the use of Apex houses, may I offer a word of warning to those who are intending to build their own, or contemplate their adoption in any form or size.

(1) I consider—and have proved—that the angle contained between floor and sides need not be greater than 60 degrees, and may be as sharp as 50 degrees to secure an induced current efficiently. But I would consider it a grave danger to construct my sides at an angle of 45 degrees on account of the possibility of the "banking" of foul air above the birds' heads. The roof is approaching too nearly to the horizontal for a free up-lift of foul air.

(2) At all costs avoid admitting the air through the floor itself. It is not the right position. The air ports should not be less than six inches above floor level, and in the sides of the house.

I note, Sir, your recent remarks as to lack of warmth in houses being responsible for roup and kindred ailments. It is encouraging to see that more consideration is being given to the scientific construction of poultry houses, as I am convinced that the haphazard lines on which they have for so long been constructed is a fruitful cause of disease. I have never had a case of roup, but I also have never had a draught in my houses.

Re Mr. Hemelryk's structure, described in your issue of 15th July, I built a duck house with a similar form of roof, but found it necessary to put wire netting *on top* of the felt as well as underneath, to keep it from "panting."

I am curious to know why he, or anybody else, requires four square feet per bird for a *laying and sleeping house.* Yours faithfully,

C. WINTHROPE SOMERVILLE.

THE LANCASHIRE UTILITY POULTRY SOCIETY.

INTERNATIONAL EGG-LAYING TEST, 1924-25.

Ninth Report—May 29th to June 26th.

The weather during the ninth period has been very hot and dry, which has helped to make broodiness heavy, and persisting moulting is also beginning to show itself. Considering all the conditions, the egg yield remains good, and the birds are in good health.

Below is a list of the leading pens and individual birds for the month in the number of eggs laid.

Figures are Eggs for Month and Total to date respectively.

Large Breeders. Section 1.—W. Crabtree, Twiston, 152, 1659; F. Snowden, Cowling, 152, 1533; R. Marshall, Forton, 192, 1655.

Large Breeders. Section 2.—J. R. Hull, Thornton-le-Fylde, 130, 1407; F. Harvey, Bretherton, 140, 1493; Mrs. M. Molloy, Crumlin, 153, 1494.

Large Breeders. Section 3.—F. R Welch, Bewdley, 128, 1556; W. Hammett, Blackpool, 111, 1273; W. B. Bradley. Broughton, 153, 1311.

Large Breeders. Section 4.—J. Thompson, Shrewsbury, 212, 1663; F. Snowden, Cowling, 174, 1506; R. Rodwell, Nelson, 190, 1549.

Large Breeders. Section 5.—R. Rodwell, Nelson, 180, 1635; S. Street-Porter, Ely, 159, 1456; G. B. Metcalfe, Lechlade, 171, 1494

Small Breeders. Section 6.—J. W. Lodge, Holmfirth, 83, 849; Dr. J. E. Helm, Newchurch-in-R., 43, 723; P. H. Sephton, Rufford, 79. 799.

Small Breeders. Section 7.—T. Lumb, Hebden Bridge, 92, 819; G. E. Marsden, Lostock Hall, 94, 789; C. C. Humber, Hoole, 44. 735.

Small Breeders. Section 8.—T. Rossall-Sandford, Shrewsbury, 54. 797; Col. S. Sandbach, Abergele, 77, 608; W. J. King, Leamington Spa, 74, 539.

Small Breeders. Section 9.—F. F. Fisher, Tarleton, 96, 899; G. W. Sutcliffe, Hebden Bridge, 109, 897; J. McKechnie, Tarleton, 101. 829.

Small Breeders. Section 10.—W. A. Lansley, Whitchurch, 95, 794; O Rawlinson, Waverton, 82, 751; J. H. Hodgkinson, St. Ives, 79. 671.

Small Breeders . Section 11.—Guy Mart, New Longton, 58, 718; Eliz. Priestley, Oxford, 68, 690; Capt. J. T M. Mee, Gressenhall, 59, 585.

Single Bird. Section 12. Heavy.—J. R. Hull, Thornton-le-Fylde 20, 180; J Rainford, Penwortham, 17, 168; Mrs. M. Rogers, Hurstpierpoint, 22. 184

Single Bird. Section 13. Light.—S. J. Parsons, Musbury, 24, 184; F. Snowden, Cowling, 20, 159. R. H. Fryers, Bradley, 23, 171.

Novice Breeders. Section 14. Heavy.—Miss Walker, Hothersall, 71, 762; W. Ellwood, Galgate, 78, 700; R. Hargreaves, Barton, 82, 749

Novice Breeders. Section 15. Light.—W. Ellwood, Galgate, 99, 839; R. Bradley, Hutton, 93, 785; S. Marquis, Grenhalgh, 72, 746.

The Importance of Proper Ventilation.

Between the years 1884 and 1894 the useful life of the London Cab Horse was increased by one-third. Can the Poultry Industry claim this rate of progress in the last thirty years? I think the answer is "No."

I know that the hen cannot be compared to the cab horse in any way whatever, and that possibly it is not in the least required that the working life of the hen should be increased, unless it could be made to maintain its pullet rate of production for several years.

For the purposes of this article it is not so much the actual extension of the useful working life, and all that it implies, that interests us, but it is how it was accomplished. It was accomplished on the principle that our Editor has so often expounded, i.e., "Prevention is better than cure."

The London cab horse owner had no time to spare for the curing of invalids. The health of his horses was maintained for this increased period by bette sanitary conditions, brought about by the scientifi application of the laws of ventilation, even if they wer rather loosely applied. This does not imply that a the end of that extra period their health gave way t disease; but that age (although young compared t horses of some other occupation) prevented their retention in that employment from an economic point o view.

Now to get to the subject that more directly applie to our industry. We have heard a great deal, especiall recently, of very serious outbreaks of various diseases These outbreaks are becoming more numerous, and als more virulent, as time goes on. Of course, this is t be expected with the enormous increase of poultry i the country in the last few years. But what is mor serious is that the percentage of outbreaks to th number is rapidly increasing.

About a year ago some excellent articles on "Healt by Ventilation" appeared in "Eggs"; but, so fa with very few exceptions, the principles of ventilatio which were explained in those articles have bee totally ignored. The poultry appliance makers as whole have not made one step forward in the las twenty years. Most of them have a pet design of thei own, or a slight modification of the stereotyped idea which deceived a large number of purchasers, principally by their novelty, but few of them have an applie system of ventilation on the proper lines.

A short time ago I wrote to the maker of my Broode Houses to ask if he had any suggestions for improvin their ventilation. The reply that I got, and the sketc attached explaining his system, and the reasons wh no improvement was required, surprised me in th extreme, that a well-known appliance maker should b so utterly ignorant of the principles of ventilation. Th sketch sent allowed for absolutely no ventilation a all, which was borne out by the actual results of th house.

Although the principles have been expounded befo now in the Poultry Press, I feel that it will be no wast of space to do so again, as apparently they have not yet reached the appliance makers, and the poultryman who makes his own houses. In the first place Ventilation by Induction is the only method that is suitable for poultry houses. It is automatic, costs nothing, and only depends upon following a few simple rules. Out of doors nature takes her own steps for maintaining in their due proportion the proper constituents of the air by circulation. But in a closed hen-house there are no means by which she can carry on her restorative processes. Hence the need for ventilation applied in some form or other. It is quite obvious that if we wish to maintain the health of our stock, it is absolutely necessary to maintain and restore the proper constituents of the air.

We here rely upon the fortunate fact that the peculiar properties, or state, of the gases which constitute pure and foul air, afford great facilities for automatic ventilation. Gases, when heated, expand very rapidly, and, to a great degree, as they expand, they become lighter. Carbonic acid gas, when at an equal temperature, is heavier than air, but when heated, on being discharged from the lungs of a fowl, its tendency is to rise. Also the temperature is raised by the bodies of the fowls. The lightness of the foul air solves the problem of its replacement by fresh air. If there is no opening, what becomes of it? The foul air rises because it is lighter than the surrounding air, but as it cannot escape it has to remain in the house. It gradually cools and descends, becomes mingled with the remainder of the air, and is again breathed by the birds.

Although we cannot see this action, it can easily be demonstrated by coloured gases. In houses where the only apertures are high up, and after the continual ascent and escape of heated foul air, a tendency to a vacuum is created in the lower part of the house. It is now necessary to remember that the pressure of the atmosphere is approximately equal to 14lbs. per square inch When the tendency to a vacuum has been created the pressure of the air outside overcomes the upward current of heated air, and cold fresh air will rush in at intervals to supply the vacancy. It is this continuous rotation of events that causes all the harm. No animal can stand these unpleasant cold draughts suddenly coming down on them. This always happens where the inlets and outlets are above the level of the birds or chickens.

To prevent these sudden changes it is absolutely necessary to admit air by another series of apertures lower than the birds which are absorbing the air These apertures should, of course, be protected by baffles, or some other method, to prevent a direct blow through into the houses during a wind.

In houses with ridge ventilation the windows above the level of the perches should never be opened. Everybody knows how objectionable a cold draught in a room is; so the very greatest care should be taken to ascertain that a sufficient intake of fresh air is provided in the lower part of the house, without even the vestige of a floor draught

As has often been pointed out in "Eggs," animals and fowls do not as a rule suffer from reasonably low temperatures, but they cannot stand anything in the nature of a draught or stagnant atmosphere.

I think that from all this it is plain that the "lean-to" type of house has nothing to recommend it. It has been successful to a certain degree in some specially favoured districts. In the majority of exposed positions they are the source of most of the troubles of disease and bad results. With properly ventilated houses not only will all results be far better, but there can also be a great saving in space. I do not believe that the four square feet floor space for each bird, when run on the semi-intensive system, is a necessity, which is the figure generally given in text books.

In constructing poultry houses it is not only necessary to embody the principles of ventilation, but also to make provision for their application. To illustrate this, let us take the "Apex" house, which is now making its reappearance on the market. It is the type of house which will most easily conform to the requirements at the least cost. If the breadth of the floor is too great in proportion to the height of the apex, the sides will not slope at a sufficient angle to allow of an adequate movement of atmosphere to supply the needs of the occupants.

I expect that these views will be opposed from many quarters. The appliance maker will not want to change his pet model which he has exhibited at the shows for years. Neither will the house owner like to realise that his existing houses conform to no principles whatever. But perhaps these serious outbreaks of disease will force us to realise what the London cab horse owner did forty years ago.

THE UTILITY DUCK CLUB AND THE NATIONAL UTILITY POULTRY SOCIETY.

NATIONAL DUCK EGG-LAYING TEST, 1924-25, held at Bentley, Suffolk.

Report for Ninth Period—13th June to 10th July, 1925.

DUCKS —Practically all the ducks are now in full moult, and egg production is, therefore, at its lowest figure. The exceedingly hot and dry weather experienced here for so long is very trying to the ducks, who always get through the moult more quickly in damp or wet weather.

Mr A. N. Dickson's Three K.C.'s now hold highest average per bird in Test. Mr. H. S. Godsmark's Three White Runners are second, and Miss Cavanagh's Five F. and W R.'s hold first place in Championship Section.

Mr. A. N. Dickson leads the Khaki-Campbells, but Capt. H. St. G Maxwell's pen now holds second place. Mention should be made of Miss Marjorie Fowler's pen, her Two K.C.'s having a record of 329 eggs (The third duck died at beginning of Test).

Mrs. G. Streatfield and Mr. Ben Clark tie for first place in Fawn and White Runner Section.

In Buff Orpington Section Mrs. Wyndham Malet's pen leads.

Mr. F. Gardner's Abacot Rangers continue to hold first place in A.O.B. Section, but Mons. Grandjean's new French breed, Granzam's Bleus, now hold second place They are a dual purpose breed.

I regret very much to have to report a most serious accident to Capt. Maxwell's duck K.C. No. 123, which was sitting amongst the long grass, and whose leg was completely severed by a grass-cutting machine.

The tragedy is the greater because two of Capt. Maxwell's birds are still in lay, and, as mentioned above, he now holds second position out of 31 pens. No. 123 has so far made a good recovery, and can get about fairly well again in the circumstances.

A. E. BARR

EGG PRODUCTION OF LEADING PENS.

Figures are Eggs and Points to date respectively.

Section 1. Championship (Five Ducks).—Miss E. Cavanagh (F. and W.R.), 837, 837; R A. and A. M. Johnson (W.R.), 734, 734; C. Powell (F. and W.R.), 738, 729; Chivers and Son (K.C.), 745, 729.

Section 2. Khaki-Campbells (Three Ducks).—A. N. Dickson, 532, 532; Capt Maxwell, 482, 482; Oscar C. Brown, 477, 473.

Section 3. Indian Runners (Three Ducks). (a) Fawn and White Runners: Mrs. G. Streatfield, 447, 447; Ben Clark, 448, 447; A. H. Fox-Brockbank, 438, 437. (b) White Runners: H. S. Godsmark, 517, 517; E and T. Bullmore, 446, 446; W. R. Partridge, 428, 422

Section 4. Buff Orpingtons (Three Ducks).—Mrs. Wyndham Malet, 411, 411; Miss B. Raye, 399, 394; Lucas and Power, 392, 389

Section 5. Any other Breed (Three Ducks).—F. Gardner, 444, 444; Mons. Grandjean, 426, 426; Dr. T Henneppe, 387, 386.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, 24th JULY, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in small supply and realises higher prices at Bristol and Hull, the average rate for the markets reported being 12s. 5d per cwt., as compared with 12s 1d. last week. Imported wheat is in moderate request and is again dearer, Argentine averaging 13s. 10d. per cwt., an increase of 5d. per cwt. on the week. English feeding barley is unchanged, except at Bristol, where, owing to short supplies, prices have advanced from 10s. 3d. to 10s. 6d. per cwt. Imported feeding barley is in fair request and slightly dearer. Limited offerings of home-grown oats maintain recent prices and imported descriptions also make late rates, while at London, with a fair trade passing, quotations are slightly firmer Maize is in rather small supply, and although trade is only moderate. is again dearer, Argentine averaging 10s. 5d per cwt., as against 10s. 1d. a week ago.

Offals are in better request, and bran records increases of 5s. to 10s. per ton, while at London coarse middlings have advanced from £7 17s. 6d. to £8 7s. 6d. per ton. Meals meet with rather more enquiry and in several cases maize products realise more money.

MILLERS' OFFALS. Bran (British): Bristol, £7 17s.; Hull, £6 17s.; Liverpool, £7; London, £7 2s. Broad Bran: Bristol, £9 10s.; Hull, £7 17s.; London, £8 15s. Middlings—Fine (Imported). London, £9 12s. Coarse (British): Bristol, £9; Hull, £8 10s.; Liverpool, £8 5s.; London, £8 7s. Pollards (Imported): Bristol, £7 17s.; Hull, £7 5s; Liverpool, £7 5s.; London, £7 10s. Rice Bran: Bristol, £7 17s.; Liverpool. £7 7s. MEAL.—Barley Meal: Bristol, £12; Hull, £11 10s. London, £12 2s. Maize Meal: Bristol, £12 2s.; Hull, £10 18s.; Liverpool, £11 7s.; London £11 10s. Maize Meal (South African): Bristol, £10 15s.; Hull, £9 10s.; Liverpool, £9 10s; London, £9 17s Maize Germ Meal: Bristol, £10 15s.; Hull, £10; London, £9 10s Maize Gluten Feed: Bristol, £11 5s; London, £10. Locust Bean Meal: Bristol, £9 15s.; Hull, £9 10s.; Liverpool, £9 10s.; London, £9 15s. Bean Meal: Bristol, £13 15s; Hull, £11 13s.; London. £13. Fish Meal: Bristol, £20 10s.; Hull, £19; Liverpool, £19 10s.: London, £19 10s.

EGGS AND DEAD POULTRY.

British eggs are in quietly steady demand at fully recent prices, while imported descriptions generally attract little attention at lower rates. A very slow trade for dead poultry is reported.

Week-end prices—Eggs (per 120): British, 17s, 14s.; Irish, 16s., 14s. 6d.; Danish, 16s. 3d., 15s 6d.; Dutch, 16s. 6d., 15s. 6d.; French, 14s. 6d., 14s.; Belgian, 15s 3d., 14s. 3d.; Italian, 14s. 6d., 13s 9d.; Lithuanian, 13s. 6d., 12s 6d.; Russian, 12s. 6d., 11s. 6d.; Chinese, 12s., 10s. 9d.

Dead Poultry (per lb).: Fowls—Surrey, 1s 8d., 1s. 4d.; Irish, 1s 4d., 1s. 2d.; Others, 1s. 7d., 1s. 2d.; Ducks, 1s. 2d., 1s

EGGS.

Per Doz.—Ashford: First, 2s; Second, 1s 8d. Birmingham, First, 1s 7¾d; Second, 1s 7¼d. Bridgwater: First, 1s 9d; Second, 1s 7d. Chelmsford: First, 2s; Second, 1s 9½d Colchester: First. 1s 10¾d; Second, 1s 7½d. Doncaster: First, 1s 10d; Second, 1s 9d. Dorchester: First, 1s 8¼d; Second, 1s 7d. Exeter: First, 1s 10d. Hereford: First, 1s 7d. King's Lynn: First, 1s 8d; Second, 1s 6d. Llandilo First, 1s 6d; Second, 1s 5d. Mold: First, 1s 8d; Second, 1s 7d. Montgomery: First. 1s 6d Newport (Mon.): First, 1s 9d; Second, 1s 3d. Norwich: First, 1s 8d; Second, 1s 6d. Oswestry: First, 1s 10d. Penzance: First, 1s 7d; Second, 1s 6d. Saffron Walden: First, 1s 11½d; Second, 1s 7¾d St. Ives (Hunts): First, 1s 9½d; Second, 1s 8½d. Salisbury: First, 1s 8d; Second, 1s 7d; Skipton: First, 1s 7d. Truro: First, 1s 5d: Second, 1s 4d. Welshpool: First. 1s 10d; Second, 1s 7d. *Carlisle: First, 2s 1d. *Derby: First, 1s 9d. *Ipswich: First, 2s: Second, 1s 6d. *Lincoln: First 1s 10d. *Shrewsbury: First, 1s 9d; Second, 1s 8d. *York: First, 2s; Second, 1s 11d.

FOWLS.

Per lb.—Birmingham: First, 1s 6d; Second, 9d. Doncaster: First, †5s: Second, †4s 6d. Exeter: First, 1s 4d. Hereford: First, 1s 6d Llandilo: First, 2s: Second, 1s 10d. Newport (Mon.): First, 1s 9d: Second, 1s 4d. Truro: First, 1s 5d. *Derby: First, †5s; Second, †4s. *Ipswich: First, 1s 9d.; Second, 1s 6d. *Lincoln. First. †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 4d *York: First, †5s: Second, †4s.

DUCKS.

Per lb.—Birmingham: First 1s 6d: Second, 1s 4d. Doncaster: First †5s: Second. †4s 6d. Exeter: First. 1s 3d. Hereford: First, 1s 4d. Llandilo: First, 2s; Second, 1s 10d. *Derby: First †5s; Second. †4s. *Ipswich: First, 1s 6d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers † Per head.

APPLICANTS FOR MEMBERSHIP.

Harris, Frank, 15, Col Lane, Hay Green, Selly Ooak, Birmingham.
Worrall, Mrs. A. de, Victoria College, Jersey.
Butler, Mr H., The Grange, Flaxton, York.
Parratt, O., Boundstone Road, near Farnham, Surrey.
Schlizzi, Miss M., Guilsborough Court, Northampton.
Jerram, M. R. K., Heather Lodge, Ferndown, Wimborne.
Purser, F. H., Church Villa, Welland, Malvern.
Hodgins, R. C., Makerewa, Thurama, Mauriceville, New Zealand.
The Manager, St. Christopher Fruit and Poultry Farm, Broadway, Letchworth, Herts.
Le Quesne, R. J., Point Plaisant, St. Peter's, Jersey.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, July 29th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

LANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES.

A Council Meeting will be held in the Master Builders' Room, Preston, on Saturday, August 8th, 1925. Chair to be taken at 3 p.m. Agenda:—(1) Minutes of last Council Meeting. (2) Letters and Correspondence. (3) National Poultry Parliament Meeting, held at Harrogate: Delegates' Report. (4) Accounts. (5) Sub-Committee's Reports: (a) Educational and Propaganda; (b) Finance; (c) Laying Test; (d) Show. (6) Any other business. (7) Draw.

The following Sub-Committees are requested to meet at the same place at 2 p.m.:—

Educational and Propaganda.—Messrs. W. Grove, T. Edmundson, J. Whalley, Rev. A. J. King, D. Braithwaite, C. Longbottom, W. A. Hall.

Laying Test.—Messrs. W. Hamnett. H. Hayes, G. E. Leigh, W. Martindale, G. B. Tootall, C. Birtwell.

Finance.—Messrs. J. P. Willacy, F. Thompson, A. D. Walton, J. Hall, W. Kay, A. Grime.

Secretaries would greatly oblige by remitting affiliation fees for 1925 as early as possible, also all counterfoils for draw must be returned by August 4th, 1925.

E. COLLIER, Organising Secretary.

656.5 05
EG

Wednesday, August 5th, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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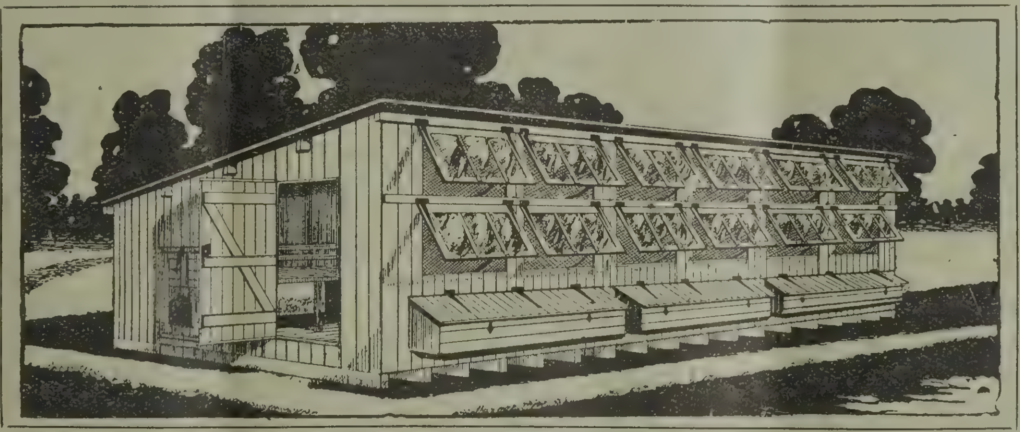

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5	30	16	8	5½	62 2 0	20 7 0
6	40	16	8	5½	82 2 0	26 9 0
7	50	16	8	5½	102 7 0	32 12 0
8	60	16	8	5½	121 14 6	38 14 0
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15	40	10	7½	6	59 17 6	17 4 6
16	50	10	7½	6	75 10 0	21 0 0
17	60	10	7½	6	90 10 0	24 17 6
18	70	10	7½	6	106 0 0	28 15 0
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Extract from absolutely Unsolicited Testimonial:— Bunchrew House, Bunchrew, Invernesshire, July 6th, 1925.

Dear Sir, I have received the "ECLIPSE" House, and am delighted with it. It is the best designed house I have yet seen, and I only wish I had known of it last year. Those who have seen it are equally pleased, not only with the design, but with the material used and the workmanship. I shall certainly recommend it to all my friends, and should I require another house I shall have an "ECLIPSE." Yours faithfully, BEATRICE A. FRASER-MACKENZIE.

PLEASE NOTE OUR NEW ADDRESS.

HERBERT W. MARTIN, PERIVALE POULTRY FARM AND APPLIANCE WORKS,
EAST HARLING ATTLEBOROUGH, NORFOLK.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, AUGUST 5th, 1925.

Editorial.

THE MARKETING CONFERENCE.

Disease and Marketing were the chief topics of nterest at the National Poultry Parliament at Harrogate. The S.P.B.A. resolution with regard to the former was unanimously accepted, and it is to be hoped that the Committee will be appointed, and will undertake its work in accordance with the spirit of the resolution. If that is done, great assistance will be rendered to the industry

We are not concerned wholly with the immediate present, but should think of the years to come, and recognise that the fight with disease is likely to be a prolonged one, and that the problem is more likely to be solved in the field than in the laboratory. We say frankly that the general attitude of poultry-keepers in pinning their faith on the laboratories in ighting disease is, in our opinion, an utterly mistaken one.

The resolution by Mr. Leslie Williams, that a Conference on Marketing should be held at an early date in London, has met with general approval.

The concluding words of the resolution, as accepted by the National Poultry Council at Harrogate, are as ollows:—

> "Also to consider the desirability of urging the Government o pass legislation with a view to registering dealers and conrolling the marketing of eggs, on similar lines to those adopted n Ireland and Denmark."

In our view the whole conference will be so much waste of time unless it is definitely decided that the Government shall be urged to pass legislation which hall inflict heavy penalties on those who deliberately, or through carelessness, or indifference, foist stale or bad eggs upon the public. They are injuring not only he consumer, but the honest producer, are damning he British Egg and advertising the foreign. Unless teps are at once taken to make this an offence, the Conference will not be of the slightest value.

Let us take the first part of the resolution:—

> "With a view to ascertaining means by which the credit and alue of British eggs may be enhanced, and thus meet the ompetition of well-marketed imported eggs."

It is well to remember, in the first place, that this Conference has been called by the poultry farmer, or rather the representatives of poultry farmers—that is o say, the specialist producer.

It would be absurd to argue that all specialist producers are necessarily specialists in marketing. In fact, we know that they are not, and the letter which we published in last week's issue under S.P.B.A. notes is sufficient evidence that there are some very short-sighted people among them who will even stoop to fraud, and deal a blow at their own industry by sending stale and incubated eggs to distributors.

It may be affirmed that this is an isolated and an extreme case, and should not be used to support our arguments. It is an extreme case, undoubtedly, but the history of the Co-operative Societies does supply evidence which shows there *are* unscrupulous individuals who *will* send stale and often incubated eggs, and we feel we must add—in some cases buy foreign eggs and send to the distributors, who naturally are loud in their contention that the British new-laid egg is unreliable.

Undoubtedly they exaggerate the case, but the fact remains that we have these unscrupulous individuals amongst us, and they cause immense injury to the reputation of the English egg.

As has been repeatedly pointed out in these columns, we are in a very different position to the foreigner, in that we are not an exporting country. Every egg produced on our farms must be placed upon the English market. Further, we have specialised in breeding for high fecundity, to an extent which is altogether unknown amongst our Continental rivals, and as far as the Commercial Egg Farmer is concerned, the cost of production per dozen is much greater than with them. We need not mince the fact that breeding for high fecundity has resulted in a deterioration in the size of egg, and that it is up to the breeder to take steps to improve matters.

We do not agree with Mr. Keevil, who, in his address at Harrogate, stated that the Wyandotte and the White Leghorn were not suitable breeds to compete with the foreigner; but it is acknowledged that breeding for heavy production has materially affected the size of eggs laid by the White Leghorn, and that in some strains the birds will not produce what should be generally recognised as the market standard in this country—that is to say, a two-ounce egg.

With the Wyandotte we have a very difficult problem, as the small egg there is largely due to an inherited factor. With the White Leghorn the problem is totally different. The deterioration in the size of the Leghorn egg has been almost wholly due to breeding for heavy production, to the neglect of other characters of equal importance. In both cases it is a matter for the breeder. Feeding will not generally affect the size of egg to a great extent, except when the young stock have been systematically underfed, and as a consequence their bodily development has been far below the normal.

If the pedigree breeder is to check this tendency to the laying of small eggs by the White Leghorn, he can only do so by discarding as breeders those birds which we class as precocious.

Again we affirm that if the Managers of the Laying Competitions were to insist upon a minimum bodily weight of birds entered by competitors, there would be a great improvement in respect to size of egg.

As stated at Harrogate, we are now within measurable distance of the passing of the Bill for the Marketing of Imported Eggs, and unless active steps are taken at once by the leaders of the industry, we shall find that so far from its being advantageous, it may be likely to have a boomering effect, and prove but an excellent advertisement for the highest class of imported eggs. It is unreasonable to expect that English eggs as marketed now can compete on terms with the best Danish, Dutch, Belgian, and French.

It will be essential for the specialist producer to grade his eggs if he is to successfully fight foreign importers Moreover, there must be more combined effort on the part of the English producer if he expects to do so successfully, but it will be absolutely useless for him to attempt to improve marketing conditions unless he succeeds in obtaining legislation which will make it a punishable offence to place stale or bad eggs on the market, for inevitably the consumer will compare the Home product with the Foreign, and unless it is made an offence to sell bad eggs, then there is good reason to fear that eventually he will prefer the Foreign to the British.

Unfortunately, the specialist producer supplies a very small percentage of the eggs produced in this country, and is necessarily to a great extent at the mercy of the great mass of producers as represented by the cottager, farmer and those who keep fowls either as a hobby or side line, while there is always the "higgler" with whom we have to contend.

But we have been dealing with this entirely from the producer's side, and it would be well for those who represent him at the Conference to remember that there are faults of distribution, and that eggs are often held in large quantities for the sake of a better market. To cite one case: Fifty dozen eggs (new laid) were sent to a certain Co-Operative Society. Three weeks later the producer visited this Society's stores, and much to his surprise, found the eggs still there in his own cases. On asking for an explanation he was informed that they had not a sufficient quantity of eggs to send to the centre, and so these were held up

The whole question of marketing is a very complicated one. The National Poultry Council have taken the idea of a Conference very seriously, and it is to be hoped that the Council will have the support of the whole industry in their efforts to organise the marketing conditions in this country, that they will approach the subject boldly and with determination that our organisation shall not fall below that of other countries. It is absurd to talk of "scorning the foreign yolk" when in very few of the hotels and restaurants in this country it is not presented to us for breakfast, or is not used in a variety of ways to the detriment of the home product.

The Problems of Poultry Husbandry in America.

By Professor **WILLARD C. THOMPSON**,

Director, National Poultry Institute.

The following is a summary of the paper read by Professor Willard Thompson, Director to the National Poultry Institute, at the Public Meeting in connection with the National Poultry Parliament at Harrogate:—

Professor Thompson states:—

"To properly grasp the poultry situation in America one must first of all remember the tremendous size of the country, and the very wide distribution of poultry raising activities, and, further, the fact that America is not an egg or poultry-importing country.

One of the first problems of the Poultry Industry in America will be to overcome long distances and far spaces, and to create facilities and conditions which will enable poultry-keepers in the various sections of the country to profitably produce eggs and poultry. There are many sections of the country where climatic and other environmental conditions tend to make poultry farming a sound and economical enterprise, but which are not happily located near the greater centres of population. The Petaluma Valley is an example; it is a long way from a thickly populated area. The industry has been so developed there, however, that it is one of the most heavily populated poultry districts in the world.

The development of such tremendous production at once created a problem.

One may find upon examination of the Egg Market Reports from New York City that many thousands of cases of eggs from these far-away places are being handled in the East, thousands of miles from the scene of production. This has been one attempt to solve a difficult problem, but has had an effect, of course upon eastern-produced eggs. The result is that there still exists the question as to whether or not the final solution has been reached. Many think it has not and there appears to be rather a firmly-established feeling that the matter of overcoming long distances will be one of organisation and co-operation among the actual poultry producers themselves; a banding together to pool efforts, ideas and energies toward finding the nearest, most practicable market, and the most efficient method of placing the collective produce in the hands of the ultimate consumer at a reasonable price.

Is it not true that there are many centres of poultry production in this country? I recently visited a county in which it would seem that climatic and other conditions ought to make poultry and egg production a very easy and economical line of work, but poultry men there told me they had no paying market. They expressed a desire to try co-operative effort.

The census figures in America indicate that the vast majority of eggs and poultry produced in tha country are produced by the so-called "farm flocks"—poultry kept as a side line. The average production of the farm hen is not much more than 55 eggs per year. The problem, therefore, exists of building up the farm poultry flock to a status which will be economically sound. I venture to suggest that in England we must recognise the tremendous economic significance of the farm poultry flock, and try to make it universally recognised as a profitable part of the farm.

Another problem of Poultry Husbandry in America would seem to be to be concerned with the building up of efficient breeds, varieties or strains of fowls with which to stock the commercial as well as farm poultry plants. We, speaking universally, need an increased capacity for egg production to be established generally; we need to increase the average number of eggs per year per fowl, and still maintain our birds in health and strength. Some day we shall reach a point beyond which we cannot safely and wisely go. I cannot but believe that the basis of the solution must be the actual known record of the individual. We must not depend upon parents alone, helpful as culling and selection are in their proper place.

Very closely associated with this last-mentioned problem is to be found the problem of developing and establishing types of fowls which will have sale value sufficiently high to warrant quantity and continued production. Sale value is made up of a combination of known pedigree, ability to perform efficiently, and quality of appearance, based upon nearness to accepted standards.

I greatly covet a well-bred fowl as the basis of our Poultry Industry.

Poultry and egg consumers, or buyers, are becoming more and more critical as the Industry advances. I feel that another American problem which is pressing for attention to-day, then, is establishing more universally a careful attention on the part of poultry farmers to breeding and feeding for an increased size of egg, the production of a better and more uniform quality of egg, and the packing of eggs for market in more efficient containers. A solution to this problem will have a great beneficial effect upon poultry production everywhere.

The marked attention given to the weight of eggs at the English Laying Trials is worthy of the plaudits of the whole poultry world. The rigid standard should be maintained. The public mind must never forget the importance of breeding for the larger egg. Our markets generally must some day come to purchase on a quality and grade basis.

But, aside from the actual problems of production, it would appear to me that Poultry Husbandry in America is facing other, and, perhaps, greater problems. I must place as the first of these, the problem of creating a unified and effective force by which the poultry industry of the country may make itself heard when necessity arises either for its promotion, its protection, or its development. Many local and state organisations have been created, and have and are performing extremely useful functions, but the poultry industry in America has reached such gigantic proportions in these days that a great national voice must be produced.

It is scarcely possible to review problems which confront Poultry Husbandry in America, without mentioning that serious, and apparently ever-present problem of the maintenance of health and prevention of disease. During this recent winter the whole country has been more or less affected by the peculiar and almost unexplained outbreak of a highly infectious fowl disease which they have called "European Fowl Plague."

(From what Sir Stuart Stockman had to say with reference to the outbreak of European Fowl Plague in the States, we think Professor Thompson will agree that it has now been explained.—Editor.)

In some of the poultry-raising areas great losses have been caused through the foothold gained by intestinal parasites, such as round worm, and the tape-worm, by roup, chicken pox and the canker group of troubles, by Avian Tuberculosis, and other contagious diseases. Some of the trouble no doubt is due largely to too great intensification of methods without due regard for preservation of health, while in other cases the outbreaks may be due to too great haste to force the coveted high average egg production per fowl per year. I feel that the disease and health problems of American poultrymen are not to be viewed as impossible of solution, but rather as warnings of the necessity of certain changes in management, correction of over-ambitious programmes of development, and the urgent need of high-class research by scientific men and women interested in the industry.

A second great problem, and to me one of the most interesting and important of American poultry problems, is that which must deal with the adjustment of the whole American scheme of poultry raising as a national industry to certain pronounced and important advances made in related or allied industries in these latter days. I refer particularly to the baby chick industry, and its first cousin the artificial incubator manufacture. The American baby chick industry has jumped forward in very recent years until one may find in every part of that country centres of baby chick production, hatcheries from which millions of baby chicks are being poured out into the industry every spring.

I sort of feel that the American poultry industry is in the midst of a time in which the highest sort of specialisation is taking place, and poultrymen are finding it advantageous to proceed along only one, or at the most, a few lines of poultry production instead of practising general poultry production as has been the tendency in recent years. Specialisation brings its own problems and changes."

Saskatoon Poultry Ranch,
Nine Mile Ride, nr Wokingham, Berks.
6th July, 1925.

Dear Sir,—I have been two years poultry farming, but have learnt more the last four months since taking "Eggs" than all the time before. It tells you how to do the right thing without going all round the bush to find it. Advice, Concise and Correct. If newsagents had a few spare copies I think a lot more would be sold in this district.

Yours truly,
(Signed) W. J. RISELEY.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

DIVERGENT OPINIONS.

I have received the following letter from one of our Yorkshire readers:—

"Dear Sir,—According to the late Oscar Smart, it is unwise to cross strains; but, so far as I can see, a good many breeders seem to disregard his teaching. Will you please explain why they are doing so. For example, in the 1925 Register, page 112, under Leghorns, White, it reads as follows:—

Strain of Male.	**Strain of Females.**
W. White.	Jones-Smith-Brown.

Surely this is crossing strains? I was always under the impression that one must keep to one strain to get good results. I have some Black Leghorns, and I am anxious to know how to proceed as I am just making a start.

Would it be in order to get some pullets of another strain to make up the number I require, and mate them to a cock of the original strain, or any other strain, or should I keep to the original strain throughout."

I have had a good deal to say on this subject of crossing strains of late, and apparently my correspondent has not read what has been written.

Personally, I am afraid we are jumping to conclusions; when we advise that strains should not be crossed, as there we were flitting from one extreme to another; for in the old days, as far as egg production was concerned, if you had some good laying hens you were always advised to cross them, either with another breed or another strain, with the result that very frequently the progeny laid considerably worse than their dams. That is quite explainable, for we were introducing factors which were dominant to those which led to high fecundity. Hence came the advice, which was very sound at the time, not to cross strains or breeds, but as I have tried to point out in previous articles on the subject, when selection has been on the same lines in two different strains, the risk of introducing characters which will be inimical to egg production (broodiness may be given as an example) is reduced to a minimum.

I do not want to be too definite on this point because I hope it is one which the Council of the S.P.B.A. may be induced to make the subject of an experiment, but it is really an important matter to breeders.

Now to answer my correspondent's question, he has some Black Leghorns, and is anxious to know how to proceed. I will endeavour to give, for his benefit, an example of what I mean. We would assume he has trap-nested Black Leghorns, that they are typical birds, and commenced laying at from 5½ to 6½ months old. The winter record (S.P.B.A. record) is 40 eggs or over, and the full year's record 180. They are non-broody, and he is satisfied with the size of egg. He will have here all the factors which go to make up high fecundity, viz.:—Early Maturity as apart from Precocity, Winter Laying, and if he takes as the minimum for the year 180 eggs, a good rate of laying through the year. I do not think he is right when he says that one must keep within the strain to get good results. Of course, indiscriminate out-crossing would be suicidal, but judicious out-crossing, with a strict knowledge of what is required, would, in my opinion, be beneficial.

If, for the pen which I have given as an example, he purchased a cockerel from a dam with a record of not less than 50 eggs for the winter months, non-broody, and a year's record of 230-240, there would be not much fear of any bad results from the crossing of strains.

As to his getting some pullets from another strain, to make up the number he requires, and mating them to a cockerel of another strain. That will be all right if he is sure of the breeding value of these pullets. That is, as far as records will help him

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THE CRITIC CRITICISED.

In our issue of April 1st I criticised an article, or, shall I say, a statement by Mr. C. A. House, in "Poultry World," entitled "Evils of the High Record Craze—High Records and Constructive Breeding are not Allied."

While I stated that I entirely agreed with Mr. House as to the *Evils of the High Record Craze*, I said:—"A craze is one thing; to breed from high record hens, merely because they have high records, may come within that category, and be justly condemned. The intelligent use of the 'exceptional' is, to my mind, however, constructive breeding in the best sense of the term: whether applied to the high record hen or anything else which tends to improve the economic qualities; there is nothing constructive in breeding birds for excess of feather, exaggerated head points, monstrous size, because they are all destructive, or it would be more correct to say, opposed to the economic qualities of the breed."

Further, I said:—"You cannot raise the average of the breed by breeding from the 'average.' That could only be done by breeding from exceptional individuals. If you depend on the *average* the "pull of the race" is too great and your average would fall to a lower standard each year."

Now there was a Conference on Disease held by the Poultry Club on Monday last, and Mr. Caseby and Mr. Brain were both of opinion that it is the continued breeding from birds that have been forced to yield, as Mr. Brain said, "three to four times the production that nature intended," that has caused our poultry to be so troubled with disease. Let us remember first that this Conference was called by the Poultry Club, and was mainly attended by fanciers, whose sympathies are not always with the utility breeder, and who are inclined to criticise his methods and attribute to him all the ills which beset poultry-keepers at the present time.

What I said in my criticism was:—" We readily admit the craze for high records is responsible for many of the evils of the present day, and incidentally that the formation of the S.P.B.A. was due in the main to complaints from several sources of the effect of *indiscriminate* breeding from high record hens."

I entirely agreed with Mr. House as to the evils of the high record craze, but I could not, and do not, accept his statement that "high records and constructive breeding are not allied."

Further, I protested very strongly against the assertion of two breeders cited as men of National and International fame, who said they had never seen a case of B.W.D. among their stock, and had never met an exhibition man that had. Frankly, these two individuals, whatever their fame may have been, could not have known what they were talking about.

Long before the "utility craze," as the fancier is pleased to call it, was in vogue, B.W.D. was prevalent. At that time it was known as "white scour"; and as for Diphtheric Roup, this was first introduced into this country as far back as 1876. However, this is all by the way. What I would point out is that we are getting a little bit panicky, and many of us are inclined to attribute the increased prevalence of roup to some one particular cause. If we attempt to fight the disease on these narrow lines we shall certainly not succeed. We have to fight it all round and recognise it as a breeder's problem—a problem of nutrition, a housing problem, and also one of rearing. We have to consider the total effects of our methods, and when we have done that we may be in a position to fight disease.

At present too much stress is laid on some particular factor, and we have to consider the problem as a whole.

THE FOOD PURCHASE SCHEME.

I have received the following letter from one of our Somerset readers in reference to the scheme. He says:—

> "It may interest you to know that I consider we are getting quite 20 per cent. better value, considering prices and quality, by purchasing this mash instead of the local stuff."

This is very satisfactory, and many other letters to the same effect have been received, but what is probably of greater importance to our members, as a whole, is the fact that we have frightened a large number of corn merchants, and have compelled them o reduce prices to their customers. Letters to this ffect are repeatedly received, and many of our members who have asked for the Price Lists to be sent to them, have stated deliberately that they are not buying from us, but are using these Price Lists to take o their corn merchants, and by showing them the prices have compelled them to meet them.

Mashes made up to S.P.B.A. formula, and sold through the S.P.B.A., are in many cases fifty per cent. cheaper than the proprietary mashes advertised o lavishly, and, further, we guarantee that the quality of the ingredients used is equal to anything n the market.

Since writing the above a lady has written in reference to the food supplied, and concludes by saying:—'I never saw the birds in such good condition as they ave been under your food supply."

THE NATIONAL EGG-LAYING TEST.

Mr. J. N. Leigh writes to tell us that the particulars f the test are now ready, and can be obtained from him at Dodnash Poultry Farm, Bentley, Suffolk. There are several new features, including a section for pens of two birds each, owned by poultry-keepers owning not more than 50 adult birds. Also a Team Section open to any combination of poultry-keepers. Pens to consist of five birds each, to be bred and owned by different persons. A section for first-crosses is also provided. Separate sections are to be provided for all breeds for which 20 or more entries are received, and sub-sections for breeders of not less than ten entries.

KEIGHLEY AND DISTRICT BRANCH.

The Secretary, Mrs. Wilson, writes to tell me that circumstances have occurred which necessitate the alteration of the date of the Second Annual Open Utility Poultry Show. The date has now been changed from November 7th to November 14th.

The schedule is being prepared, and Mrs. Wilson will be pleased to hear from members or friends who are willing to guarantee classes or offer specials. Some educational demonstration has been suggested, and arrangements will be made for this to take place.

On Saturday afternoon, the 11th July, a party of members of the Keighley and District Branch of the Scientific Poultry Breeders' Association accepted the kind invitation of their President (Mr. Frank Snowden) to visit his poultry farm at Raikes Hall, Cowling. The journey to the farm was made by motor 'bus, and the party was favoured with glorious summer weather.

To those who are familiar with the situation of the farm the health and vigour of the stock came as no surprise, for, in addition to Mr. Snowden's well-known skill as a breeder, the environmental conditions are ideal. The yards nestle under the crest of the wide open spaces of the moors [illegible] which in this area link Yorkshire with its sister county, Lancashire), and abound in pure invigorating air uncontaminated with the smoke of the industrial areas far away in the valleys.

Particular attention was paid to the pens containing winners at the various International Laying Tests. Pride of place was given to the White Leghorns, winners of the "Daily Mail" £1,000 Two Year Test. These were closely followed by the pen of White Wyandottes which won the second prize at the Missouri State International Test, 1921-22. The age of the above birds was commented upon, and Mr. Snowden informed the members that he had breeding hens nine years of age in the yards, and had only recently lost a cock after it had successfully completed its tenth breeding season.

Very great interest was displayed in the young stock. The early-hatched birds had been removed to the spacious colony houses, and the sexes were separated. In the large field set apart for rearing in small units were large numbers of younger chickens. They had free range, and were obviously in the best of health, alert and active. It was noticed that all the young

(Continued at Foot of Column Next Page).

Roup—Some Impressions.

By **FRED W. WAIT.**

It is only at the request of the Editor, coupled with the recent invitation of Mr. Toovey, that I am tempted to write upon this thorny subject.

Let me make myself clear. I have no desire to pose as an authority on the subject. I am not personally acquainted with anyone in the industry who has a complete knowledge, scientific and practical, of the causation and cure of Roup, Diphtheritic Roup or Bird Pox. Up to the present we are assuming far too much to be reliable. There is no man in the poultry industry for whom I have a greater respect than Mr. Toovey, mainly on account of the broad-minded and courageous manner in which he has equally reported both his successes and his losses or mistakes for the benefit of those poultry-keepers who are not so favourably placed as himself.

In my opinion there are two incidents in poultry farming which are a veritable nightmare, and are responsible for many failures with beginners, viz.:—Chicken mortality and Roup. For many years I have been convinced that Roup has prevailed more generally than has been imagined. It is unreasonable to expect a man who is depending upon poultry farming for a living, to proclaim his misfortune publicly through the Press It is only when a man in the independent position of Mr. Toovey comes along, that we are able to get at the truth. I am equally convinced that there should be some exceptionally strong disciplinary action, to prevent the exportation of birds from farms where the disease either is or has been recently present.

During the years I kept exhibition stock, Roup was absolutely unknown to me. The number of birds was naturally small. In the course of fifteen years' experience of utility stock I have had two outbreaks, and it is upon the methods adopted and the experience gained during this period that I intend to write.

The first outbreak, about fourteen years ago, was introduced by stock birds bought from a noted Lancashire breeder, and from enquiries made I discovered that the birds had been supplied by another man. Confidence in the breeder, and consequent neglect in isolating for ten days, brought its own reward. The record outbreak occurred some years later, when a poultryman spent his evenings—unknown to me—in curing birds upon other people's premises, and naturally brought the disease to my farm. With these two exceptions my farm has been free from any epidemic, nothing occurring beyond occasional colds, etc.

There are some writers who state that the germs of roup are omnipresent, others assert that the disease is always introduced from outside sources. I cannot agree with either theory, but am certainly of opinion that it can be developed upon the premises from many sources.

That sanitation is the best form of medication, and that prevention is better than cure, are still two faithful axioms.

There appears to me little doubt that immediate and thorough isolation is necessary. There are then two modes of operation, the individual handling and treating of every affected bird, or collective treatment of the affected flock as a whole by means of medicated water, soft food containing some medicament, and by general methods of disinfecting houses and land. In the former instance I think it is quite possible, based on experience, to save 75 per cent. of the affected birds; but treating the birds on the flock system, I can imagine that losses will be exceptionally heavy. There are such a large percentage of birds that must have individual attention if a cure is to be effected such as a diphtheritic deposit in the windpipe; the bird quickly suffocates unless it is removed; cheesy deposit with large swelling in the eyes. Where both eyes are affected, the bird loses its sight and ability to eat, consequently wastes away through sheer exhaustion, a cure being almost impossible.

The hard swellings which occur on various parts of the head and face appear to be only removable by bold action with the knife, taking away thoroughly the hard substance, and treating with some antiseptic

Many drugs and chemicals have been recommended, but while some of them may be a success in mild cases, they are quite futile once the attack has become thoroughly established. I cling to the opinion that once a strong hold on the flock has been obtained, that quite three or six months, according to the size of the flock, will be necessary before a clean sheet can be recorded.

From many observations which I have made in many places, the disease appears to gradually work itself out. The birds which contract it in the early days appear to take it in a more virulent form, while those that are affected later on seem to have had more powers of resistance, and are more easy to cure.

For this reason I hold the opinion that the therapeutic value of any drug cannot be thoroughly gauged unless it has been used right through the most stubborn degrees of the course. The drugs and chemicals which I tested many years ago were Boracic Acid, Potassium Permanganate, Hydrogen Peroxide, Carbolic Oil, Tar Acid Disinfectants and Iodine. At this period I do not remember iodine being recommended for this purpose, but I do recollect testing it with great success in many instances, and reporting to the Poultry Research Society, now defunct. To-day we fully appreciate its value.

S.P.B.A.—Continued.

birds were linby. Mr. Snowden humorously remarked that "he liked to get chickens out of the mud, and then put tops on them."

The large underground incubator room was visited, and Mr. Snowden explained his system of pedigree trays, toe-punching and wing banding.

After the round of the yards had been made, Mrs. Snowden very kindly entertained the party to tea. Mr. Hodgson voiced the feelings of the members when he described the afternoon as a very pleasant and instructive one. He asked that a hearty vote of thanks should be accorded to Mr. and Mrs. Snowden Mr. Slee seconded the proposal, and thanks were returned with acclamation.

I found, however, that the ordinary tincture of odine, containing two and a half per cent of Iodine, vas unreliable. The strong tincture containing twelve nd a half per cent., was very satisfactory, and worked uickly, both on diphtheritic growths in the mouth, nd in cases of bird pox eruptions on the head, care eing taken to keep it out of the eyes, or blindness ollows. This strong tincture does, however, give an npleasant tingling sensation, which used on the hroat of the bird is probably painful. Equal quanti-ies of the strong and weak tincture containing approxi-nately six per cent. Iodine, was tried and proved atisfactory. Probably for Avian subjects this is he correct strength.

The following is the precise method which was dopted, and which proved very successful. Every ird was isolated immediately there were any external ymptoms of having contracted the disease. These vere placed in a house 40ft. x 12ft., and had their iberty; the drinking water was sterilised with chlorine vater. Each bird was handled separately every morn-ng, and was given one tablet containing one drachm Easton's syrup. This may appear a large dose for a owl as it contains 1/62 grains of Strychnine; this rug has not, however, the same effect on avian ubjects as upon humans. All diphtheric growths in he throat were scraped off with a hairpin, and treated vith a small camel-hair brush with a six per cent. olution tincture Iodine, care being taken not to let ny quantity travel down the throat. Any external pots on the head were treated with Iodine, and in he course of three or four days or more would peel ff. Deposits of every description should be carefully urnt, as germs have been proved to return to their irility for periods over a year.

The following mixture was used in the soft food, nd was mixed with the dry mash previous to being oistened:—Sulphate Magnesium, 10 ounces; hloride Sodium (Table Salt), 10 ounces; Dried Sul-hate Iron, two ounces.

The above quantity to be mixed with one hundred-reight of dry mash. This gives approximately, in ach two ounces of dry mash, five grains each of Mag-esium and Sodium and one grain of Iron.

As Roup appears more or less a blood disease, the erapeutic value of the above appeared to me to be useful mixture. What its exact value was I cannot y, and I have never heard of anyone else using it, nd I can only judge it as part of a successful treat-ent

I am afraid that my idea of the value of iron to resent-day utility stock, even under ordinary condi-ons, does not coincide with many writers. Even y worthy friend, the Editor, thinks that present-day ereals contain sufficient Iron.

But I maintain that whether they do or not rests rgely upon the composition of the soil upon which ey are grown. I know grass lands from which a ecent Stilton cheese could never be made on account the large amount of organic iron it contains, but is is in an iron ore area; other areas may be equally eficient.

Griffiths, in his "Treatise on Manures," goes largely to the question of dressing land with sulphate of iron, and gives scores of analyses of different tubers, grasses, roots, and cereals, showing not only a large increase in the mineral constituents, but also a higher percentage of both proteins and carbohydrates.

This, however, by-the-way. The point which I desire to bring home is this, that Utility Poultry today with their high records—even flock records—are living under highly artificial conditions, which tend, in combination with lack of selection in breeding, to make them more susceptible to disease. I maintain that one grain iron per bird per day does greatly assist in maintaining the blood in a rich pure condition, in increasing vitality, and lengthening age of the hen for production purposes, in assisting it through the moulting period, and maintaining the hen generally in such a healthy condition, which will reduce the possibility of such epidemics as roup.

Certainly I do not suggest that additional iron is necessary in every instance. For years I have kept my birds in a strong healthy condition without it; but we must realise to-day that hundreds of thousands of birds are kept under confined, or semi-intensive conditions, which cannot be considered satisfactory, and this is where the trouble frequently occurs.

(Continued at Foot of Column on Next Page).

GLOUCESTERSHIRE EGG-LAYING TEST.

For Month Ended June 19th.

The following is the report on the Gloucestershire Laying Test (under the supervision of Mr. L. G. Price, County Instructor in Poultry Keeping) for the ninth month ended June 19th:—

There has been the usual seasonal decline in egg production this period, and the records now show that during the past month 5,245 eggs have been collected, against 6,132 the previous month, giving a total of 44,533 for the nine months, and an average of 139.6 in respect of the 319 pullets entered. The general health of the birds is good.

The 1925-26 entry forms and conditions are now available, and copies may be obtained from the Hon. Secretary.

Section A. (1). White Wyandotte (Professional) Five birds constitute a pen).—P. M. Hinton, 3377; H. Ludlow Hewitt, 3305; H. Bennett, 3240; H. W. Fowles, 3169; E. J. Stone, 3157; J. E. Boyd, 3103

Section A. (2). A.O.V. Heavy Breed (Professional).—Miss M. Lawrence (R.I.R.), 3357; J. G. Herbert (R.I.R.), 3335; G. H. H. Simmons (L.S.), 3227; W. R. Partridge (R.I.R.), 3169; M. C. Beale (R.I.R.), 3069; C. G. Young (R.I.R.), 2948.

Section A. (3). A.V. Light Breed (Professional).—Miss N. Townsend, 3626; Miss H. Bayliss, 3589; Sherborne Park P.F., 3415; Cotswold Pedigree P.F., 3351; G. H. H. Simmons, 3244; G. B. Young, 3239. All White Leghorns.

Section B (1). A.V. Heavy Breed. (Confined to owners of not more than 50 laying head).—Maisemore School (W.W.), 3440; A. W. Moses (L.S.), 3366; Miss M. Brown (W.W.), 3258; L. Grist (W.W.), 2937; R. T. Miles (B'Veld), 1515.

Section B (2). A.V. Light Breed. (Confined to owners of not more than 50 laying head).—C. E. Skirten, 3212; L. Grist, 3157; Miss M. Brown, 2807; J. D. Crewdson, 2796. All White Leghorns.

Pen Duck Section.—G. H. H. Simmonds (K.C.), 620; G. B. Young (K.C.), 596; S. J. Phillips (K.C.), 571; Major J. G. Dugdale (K.C.), 563; Sherborne Park P.F. (K.C.), 499; W. R. Partridge (W.R.), 471.

SINGLE PEN SECTION.

Section I. White Leghorns.—Miss N. Townsend (5), 833; L. Grist (13), 795; Miss K. Feaviour, 777; G. H. H. Simmons, 768; H. W. Stephens, 765; Miss N. Townsend (19), 762.

Section 2. White Wyandottes.—H. W. Fowles, 856; W. R. Partridge (34), 824; Lord Sherborne (37), 792; W. R. Partridge (38), 761; G. H. H. Simmons (31), 728; Lord Sherborne (39), 699.

Section 3. Rhode Island Reds.—Miss M. Lawrence (59), 814; G. B. Metcalfe, 688; S. Barnes, junr. (48), 601; Miss M. Lawrence (42), 589; W. R. Partridge, 545; A. Daunton, 402.

Section 4. A.O.V. Light Breed.—Churchdown P.F. (An.), 758; H. W. Stephens (B.L.), 573; G. B. Young (B.L.), 555; Miss M. Johnson (W. la B.), 508; Churchdown P.F. (B.L.), 502; Major J. G. Dugdale (B.L.), 477.

Section 5. A.O.V. Heavy Breed.—Miss M. Lawrence (Buff R.), 748; G. H. H. Simmons (Buff R.), 716; Mrs. E. Weinholt (Aus. Orp.), 698; Lady Bledisloe (Aus. Orp.), 661; Major J. Dugdale (58) (L.S.), 621; W. R. Partridge (B'Veld), 611.

Section 6. Ducks.—Mrs. H. L. Hanks (K.C.), 237; H. W. Fowles (K.C.), 216; F. L. Walters (7) (W.R.), 177; Mrs. W. Pearce Ellis (K.C.), 172; W. R. Partridge (15) (W.R.), 164; Miss N. Townsned (12) (K.C.), 163.

(Signed) R. A. and A. M. JOHNSON.
The Cotswold Poultry Farm, Chalford.

H. S. WRIGHT, Hon. Sec.
Shire Hall, Gloucester.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

E. M. M. (Milford-on-Sea) writes to know if I can tell her what I consider the best method of rearing chicks rapidly for table poultry. She is shortly sitting some eggs, in order to have broods for the Christmas market. Indian Game, and large Light Sussex hens. Presumably she has the paper on the Wellingham experiments with the formula. If not, I will repeat it here:—It is 20lbs. bran, 45lbs. middlings, 10lbs. S G.O., 10lbs. maize meal, 5lbs. dried milk, 5lbs. dried yeast, and 5lbs. soya bean meal To this was added 30 ounces of the following mineral mixture:—60lbs. bone meal, 20lbs. common salt, and 20lbs. powdered oyster shell. The birds were fed on this until they were 11 weeks old. when they were trough-fed for a fortnight, and then crammed for a week. They had no milk to drink, and the grain feeds were equal parts wheat and kibbled maize. I do not quite know whether this answers my correspondent's question. She will see by the report in last week's issue that the pullets made extraordinary progress on these mashes—were laying at five months old, and were well developed.

L. C. S. (Linby) writes to ask the value of sprouted oats. They are of great value, but, of course, would not be necessary while there is a plentiful supply of green food. When first introduced it was the custom to sprout them until the sprouts grew five or six inches high. This involved an immense amount of labour, and as I stated in a paper read at the Harper-Adams' Conference two or three years ago, this was quite unnecessary. They should only be sprouted until they begin to germinate, when they are ready to feed, and can be fed to poultry as grains. As to the quantity to be fed—one ounce per day would be sufficient. If they were to supply the whole of the grain feed, two and a half ounces should be given.

J. H. (Newburn-on-Tyne) writes that he is only a backyarder with a score of hens which have laid well up to a few days ago, and now he is only getting three or four eggs a day. They have diarrhoea and their combs are turning black. Could I advise him how to cure them? He feeds on a patent meal, middlings and bran in equal parts as mash in the morning, and maize two parts, wheat one, and oats one part. He asks if this patent meal is a good one. From what he writes I think the cause of the trouble must be due to the feeding, and would advise him to change it. Not having actually seen a sample of this particular meat which he is using, I cannot express an opinion. It would be advisable to give the birds a mild dose of Epsom salts and completely change the food. I would suggest he tries the following formula (if he is feeding wet): 1lb. bran, 1 alfalfa meal, 4 middlings, 1 biscuit meal, 1 S.G.O., and 1 good meat and bone meal, and as grain give two parts good oats, 1lb. wheat, and 1lb. kibbled maize; but it will be necessary to give the birds a dose of Epsom salts, and I should certainly discontinue using the meal which he is at present using.

POST-MORTEMS.

M. G. T. The post-mortem examination of the chicken showed that fowl cholera was the cause. The disease is contagious, and the mortality runs high as a rule. All the incontacts of this bird should be isolated, and the houses, nest boxes, utensils, and the parts of the runs contaminated by affected birds, should be thoroughly cleaned and disinfected with a five per cent. solution of carbolic acid in water. The houses should then be lime-washed, a quarter of a pound of carbolic acid being added to each gallon of wash. Those attending these birds should disinfect their hands, boots and clothing before they go near healthy birds in order to prevent the carriage of infection. Dead birds, litter and dropping should be disposed of by burning, and not

ROUP—SOME IMPRESSIONS.—Continued.

The following formula I have used on 400 three-year-old Leghorn hens for the past year, and to-day they could be passed for pullets:—112lbs. Steamed Bone flour. 30lbs. Table Salt. 30lbs Ground Oyster shell or carbonate of lime, 7lbs. dried sulphate of iron. Use 2½lbs. to every 100lbs. dry mash.

The whole causation and cure of Roup, etc., is more for the skilled scientist to pursue than the practical poultry farmer, who, however, can assist materially. I am in full agreement with Mr. Toovey when he states we might learn much if poultry farmers would give their experience. There are almost thousands who at some time have passed through the mill of misfortune, and who surely must have learnt something which might be of advantage to their less-informed and experienced fellow-man. This is my sole object in writing.

(To be Continued).

buried on thrown on to the manure pile. Treatment is not effective, but by chlorinating the drinking water some degree of infection from this source is prevented. Prepare a stock solution by adding one teaspoonful of chloride of lime to two gallons of water, and of this take three ounces for chlorinating every gallon of drinking water. This proportion should make the water both taste and smell of chlorine. If it does not add more of the stock solution until there is no doubt about the smell and taste.

T. The post-mortem examination of the three days old chicks showed nothing suggestive of infectious disease, but they were extremely anaemic, and this I attribute to the swarms of lice with which they were infested. These, no doubt, they got from the hens which should be ridded of the pests before being set. I should advise you also to disinfect the brooder, or further losses from this cause are liable to occur.

B. W. The Barnevelder pullet was moribund upon arrival, and the post-mortem showed the cause to be muco-enteritis, due to an exceptionally heavy infestation with tape-worms, choanota infundibuliformis, the intermediate hosts of which are the earth worm (Grassi) and the house-fly (Rovelli). I am afraid that birds so far gone as this pullet will not respond to treatment, which consists in giving a mash in the morning containing a full purgative dose of Epsom salts for each bird, and no more food until the next morning, when a mash containing one teaspoonful of powdered pomegranate root bark for every fifty birds should be given. This may be repeated after an interval of a week or ten days, the dropping and litter being collected and burned after each dosing.

H. N. M. The post-mortem examination of the sixteen months old cock showed that the cause was asthenia, a wasting disease produced by bacteria infection of the intestines. As far as is known, the disease is not infectious to bird from bird, although a number of birds may become infected from a common source. When any suspicion of this disease arises it is wise to isolate, and treat by first giving a purgative dose of castor oil to diminish the bacterial flora of the intestines, and then to give internal antiseptics to discourage their growth, 15 grains of sulpho-carbolate of zinc to each gallon of the drinking water is suitable for this, or a like quantity of sodium hypo-sulphite may be dissolved in a little water, and mixed in the mash twice daily. The droppings, etc., should be burned, and the premises disinfected regularly. The "broodiness" of this cock would be accounted for by the persistence of a considerable amount of ovarian tissue, which under normal conditions should have atrophied and not persisted.

G. W. The post-mortem examination of the three R.I.R. pullets showed that the trouble was due to a heavy infestation with round worms in the caeca, Heterakis Papillosa. These worms when exceptionally numerous produce their harmful effects, partly by the irritation they cause, and partly by their waste products that act as poisons to the body of the host they occupy. The irritation in the intestine may also give rise to reflex action on the brain, causing fits, convulsions, and sometimes coma and death. To treat, give a mash containing a full dose of Epsom salts for each bird, starve for some hours, and follow with a mash in which has been mixed one teaspoonful of powdered pomegranate root bark for every fifty birds. The droppings and litter should be swept up and burned, so that embryo worms, eggs, etc., are destroyed. It is also advisable to disinfect the floors of the houses with the same object.

SIXTH MIDLAND LAYING TEST.

Report for Ninth Month ended 12th July, 1925 (252 days).

The ninth month at the Midland Laying Test ended on July the 12th, and, despite the extraordinary heat of the past month, in conjunction with the number of broodies, the production is keeping at a level of between 50 and 60 per cent.

The health of the flock is still very good, but the heat has been responsible for throwing many birds into a moult, principally among the heavy breeds.

The feeding is practically the same as in the previous month, namely, the dry-cum-wet mash system, supplemented by morning and evening feeds of grain. The grain is scattered in the open for the birds whenever possible. The latter food has been cut down somewhat but the average wet mash consumption is good.

The following are the numbers of the broody birds which have been transferred from their own pens to the broody cotes:—129, 127, 221, 226, 238, 246, 274, 279. 282, 294, 357, 358, 381, 418, 234, 255, 285, 295, 434, 299, 272, 266, 258, 251, 236, 196, 171, 157, 147, 371, 386, 220, 234, 342. Nine birds have died during the past month, the numbers of same and the causes of the deaths are as follows:—No. 23, ruptured kidneys; No. 402, ruptured oviduct; No. 362, ruptured oviduct; No. 485, occlusion of oviduct; No. 66, worm ova; No. 239, attacked by rats; No. 210, attacked by rats; No. 194, ruptured oviduct; No. 423, degenerated egg yolk in the oviduct, also an ovarian tumour.

LEADING PENS IN EACH SECTION.

White Leghorns.—A. Snowden, Crosshills, Yorks., 633 pts.; C. J. Ashton, Hathern, near Loughboro', 644; A. Pickard, Chilvers Coton, Nuneaton, 627.

White Wyandottes.—M. F. Phelan, Northam, N Devon, 637; C. H C. Partridge, Tenbury Wells, 641; Misses Argles, Alton, Hants., 627.

R.I. Red.—K. A. Crawford, Dilham, Norwich, 603; L. A. Cooper, Footherley, near Lichfield, 604; Mrs Athol Stuart, Boxmoor, Herts, 572.

Light Sussex.—F. R. Welch, Bewdley, 592; Col. A. Dugdale, Moreton-in-Marsh, 575; W. H. Brady, Penmaenmawr, 587.

A.O.V .Light Breed.—E. Thomas, Sartonville, France (W La B.), 543; G. H Rayner, Grantham (B.L.), 501; Blaksley and Blythe Dorset (B.L.), 483.

A.O.V Heavy Breed.—H. W. Gee, Lickeye, Bromsgrove (Barn.), 552; J. Gordon Herbert, Newent, Glos (Barn.), 454; F. R. Welch, Bewdley (Bf. R), 444.

Single Bird Section.—F. H. Ramm, Shackerstone, Nuneaton (B.I.), 176; J. Small, Edgbaston, Birmingham (B.L.), 165; F. Nicholls, Avechurch, Birmingham (W.W.), 163.

THE MIRFIELD AND DISTRICT POULTRY-KEEPERS' ASSOCIATION'S LAYING TEST, 1924-25.

The report for the ninth period of the above test is to hand. The health of the flock is good. There have been two deaths during the month. Egg production is said to be only moderate. owing to the presence of broodiness in the heavy sections.

The Special Prize, offered by Mr. T. E. Burnett is won by a pullet owned by Mr P. Furness. Her record to date is 201.

The best individual score for the month is made by Mr. Firth's Nos. 111 and 76 with scores of 24 and 21 respectively, while three other birds laid 21 eggs during the month.

Answers to Queries.

Continued.

C. A. G.' (Knutsford) wishes to know what total length of perch is required for 100 birds. What distance apart centre to centre should perches be? How many nest boxes should be provided? Is there any objection to having the nest boxes facing the light? —In reply to my correspondent's first question: I should allow ten inches per bird perch room, so that for 100 birds he would require, roughly, 85 feet. For heavy breeds 12 inches from centre to centre of perches will suffice. One nest box to every four birds would be advisable; one to five is often used, but in the spring time this means a lot of broken eggs. The objection to the nest boxes facing the light is that the birds often see the eggs, and this starts egg-eating. This could be overcome, however, by nailing a piece of dark cloth across the front of the nest and slitting this up the middle. That is the only objection to the nest boxes facing the light.

R. P. H. (Suffolk) writes he is troubled with rather a peculiar complaint, which he has not seen before. The symptoms are simply that the bird's neck takes up a semi-circular position, and walks about with its beak on the ground, likewise its wings, and makes a most dejected picture. He is wondering if it is anything serious. The trouble is, I think, Limberneck, and it has been stated it is due to lack of vitamin "A." This, I think, is not correct. In the old days we used to treat it as a form of Ptomaine poisoning, and there is little doubt that the cause of the trouble is food which has been contaminated in some way, more particularly meat or fish meal. A mild dose of Epsom salts will generally put matters right if taken in time. Of course, attention must be paid to the food. I wonder if my correspondent's birds have been given any meat or fish meal which was contaminated?

L. P. (Carlisle) wishes to breed table birds for the coming spring, and asks what matings I advise. He has some Buff Orpington hens. My own impression is that nothing will beat a Houdan cockerel for this class of bird. It gives a table fowl which can hardly be excelled—quick growing and hardy. The Houdan cockerel is a very virile bird as a rule. The fertility is high and hatchability good. I would prefer this to a Game cross for this particular line of business.

R. L. (Dorking) writes that he has 17 birds—12 R.I.R., 15 months old, and five White Wyandottes, three years old. They are kept semi-intensively. They started moulting a fortnight ago, and all the R.I. Reds are not in full moult. Do I not think this is too early?—Appetites for mash are not good. They do not go for it as if they liked it, but just peck at it. They are still laying an average of eight eggs per day. They have, as a whole, been a very broody lot this season, and he has had much trouble with this broodiness which this year has been quite abnormal with him. They are fed as follows:—In the morning on handful of grain to every three birds, and in the evening two ounces of grain to every three birds. Th mixture consists of seven parts kibbled maize, on oats, and one wheat. At mid-day they get a wet mas feed of four parts middlings, two maize meal, on bran and half fish meal. He gives, say, two ounce dry weight per bird, but is varied according to th appetite. It is rather early, especially for birds of good strain, to moult, but the excessive broodines would, to a very great extent, account for this, combined with the very hot spell which we have had. Th fact that the appetites for the mash are not goo should not worry him, as the birds are not producin heavily, and as they are obviously going out of production, their appetites will be considerably less. Th feeding is correct. I do not think there is an exces of maize. This is a matter in which he can d nothing. If the birds come normally through th moult they should be in good condition at the end o it, and start laying again in good time. All my correspondent should do is to carefully watch the bird when they have finished feathering, and before the come into lay. At that period there is some dange of their putting on internal fat.

(Continued at Foot of Next Column).

Presentation to Mr. and Mrs. Tom Newman.

The July S P.B.A. Council Meeting was a little ou of the ordinary; in fact it was a celebration. I shoul like to tell the members how and why the usua sober monthly Council gathering was replaced by on festivity. Members will have noticed the announcement of Mr. Tom Newman's wedding in a June publication of "Eggs," and nearly all were aware of th Society's desire to celebrate that important event o his (and hers), and had, through their President, mad it possible for the Council to offer the bride an bridegroom affectionate tribute and esteem in a practical fashion; and that is why the Council invited th happy pair to an informal luncheon, and wished them well on behalf of the members.

I wish it had been possible for all those member who so generously subscribed to the wedding presen to have seen the Secretary's pleasure and confusion

Mrs. Hunter, on behalf of the Council of th S.P.B.A., and its 6,000 members, presented the guest with a handsome canteen of silver and a cheque for 20 guineas, with their affectionate esteem and goo wishes.

After some jolly speeches and messages of congratulation had been read from the Poultry Press the Council adjourned festivities, and settled down t the Society's business for the month.

May I add that both Mr. and Mrs. Newman thanke the members for their most generous gifts.

A MEMBER OF THE COUNCIL.

London Market Advice Table.

By **A. V. CLARKSON.**

AUGUST, 1925

The London Market has little encouragement to offer to the producer during August. As I wrote last month, producers should be using their endeavours to sell anywhere but on the London Market, where this month sees the poultry trade suffering first from a diminished demand, and, secondly, the commencement of the Game Season, because from the twelfth of the month grouse come on to the market, and naturally affect the demand for poultry.

There are two rather serious points I wish to draw to the attention of those who send their poultry to the market dead. Hot weather and muggy weather cause poultry to turn green in transit, so be sure always to thoroughly cool the birds before packing. Another very serious matter is that all birds which are caught for killing should be left to calm down before they are killed. If the bird is chased and caught and killed and plucked right away it will be very much discoloured, in fact so much so that I have seen ducks which have been so treated that when dressed they were almost brown in colour. In addition to this fact the packing is a much more difficult job where the bird has not been calmed down.

CHICKEN.—From now onwards no bird is wanted under 2½lbs.

OLD HENS.—These should be sent alive, and the heavy breeds should always be packed separate to the light breeds, which only realise a very poor price in comparison to the heavies. It is unwise to pack birds which have "gone light" or are full of water.

DUCKLING.—The only duckling required on the London market is a white one, which must be sent killed and clean plucked, and must scale 4½lbs. or over.

EGGS.—Eggs are now very scarce, and the writer thinks most producers will be able to do better locally than by sending to London, but an eye should be kept on the London quotations.

RABBITS.—The real demand for rabbits will not commence until September arrives, but where harvesting is in process, rabbits which are caught may be sent up. They should be clean paunched immediately they are killed, thoroughly cooled, and sent overnight to arrive early the following morning. It will not pay to send suckers.

GENERAL REMARKS

The salesman will supply you with crates carriage paid if you ask him.

(Continued at Foot of Next Column).

Correspondence.

ROUP—"BURN DEAD BIRDS."

To the Editor of "Eggs."

Dear Sir,—My neighbour, a Kentish Poultry Farmer, has roup badly on his farm. It is kept a big secret, and he has not told me, but a neighbour who discovered a dead hen rotten with roup—which had been buried in a local wood instead of being burned—kindly gave me the tip, and now I am taking all due precautions.

Evidently the hen was buried in the wood, and a fox dug it out—then, of course, the crows eat it, and carry the disease to other farms.

Please advise all roup victims to burn hens, and not to try cures in advanced stages, as my neighbour is foolishly doing, for if it is tried the disease will sure to spread to all the valuable pullets and ruin will follow.

Yours truly,
JOHN CRAWLEY.

What our Readers think of "Eggs."

The Rectory, Pangbourne, Berks.

Dear Sir,—I find "Eggs" absolutely invaluable, and, although I have kept fowls (and good ones, too) for sixteen years, I have never found any book or paper to give so much real help. The answers to other correspondents have always answered my questions, without the necessity for me to write.

Yours truly,
(Signed) (Mrs.) F. M. BRENNAN.

Beachamwell, King's Lynn, Norfolk.
2nd June, 1925.

Dear Sir,—Of all the many papers of various kinds which reach my house during each week, there is none to which I look forward with greater interest than my weekly copy of "Eggs," and I would like to add my word of high appreciation to that of your numerous other readers.

Your faithfully,
(Signed) G. I. MASON.

In cases where skilled labour is not available send the birds to the salesman alive, who will kill and pluck them for you at a charge of 3d. per bird.

Never overcrowd live stuff; it is both illegal and cruel. If you overcrowd some of the birds may be dead on arrival, and the loss is yours entirely.

Never dispatch poultry to market killed, but with the feathers left on.

Modern Poultry Feeding.

By TOM NEWMAN.

In the valuable article contributed to this issue by my friend, Mr. Wait, he mentions the value of iron, and states that I differ from him in that I contend that present-day cereals contain sufficient, while he is of opinion that this is not the case.

I am not going to try and prove my case, because I recognise the great importance of what Mr. Wait has to say, and there is a possibility, and it is by no means a small one, that I may be wrong; therefore I am only going to suggest to my readers that they should carefully read what Mr. Wait has to say, and use their own discretion.

He will not accuse me of in any way attempting to minimise the value of iron in the ration, and, as far as my memory serves me, my contention was that the *average* ration of the fowls contains sufficient iron for all purposes. This was apart from the cereals. Meat, for example, is fairly well off in this respect. Dried blood is rich in it, and it is present in fish meal. Then we have the vegetables—spinach, beans, cabbage, and most green foods contain a good supply.

However, I have to recognise what Mr. Wait has to say, that this would depend a great deal upon the nature of the soil on which they are grown. Bran and middlings are fairly well supplied; but this, again, would depend to some extent upon the nature of the soil on which the wheat is grown. In the north of South Australia the land has a very high content, and the cereals there grown contain a much better percentage of iron than usual.

The experiment made by Bunge with rats has been cited, in support of the value of iron in the food, on many occasions in "Eggs." It was a comparison of bread made from bran, and bread made from wheat flour. Rats fed on the bran bread made a very considerably more rapid and healthy growth than those fed on the wheat bread.

Of the cereal grains we may say that wheat is better than maize as a source of iron, and oats are better than either. Alfalfa meal is superior to clover meal in this respect, and indeed it is one of the richest foods which we commonly use.

Of course, as Mr. Wait has pointed out, there will be a very great variation in the iron content of any of the cereals which make up a hen's ration. Some would necessarily be far richer in iron than others, according to the soil on which they were grown. It has been demonstrated that the effect of adding inorganic iron to the ration is greatly increased if it is fed *intermittently and not continuously*.

Perhaps Mr. Wait will agree with me that those who follow his advice in regard to the salt mixture which he suggests would be wise if they were to give it for a fortnight or three weeks, and then rest a week or ten days.

With birds on really free range, on an average farm, I certainly do not think the addition of any salt mixture would be required, but that would depend to a great extent on how many were run to the acre.

It is quite probable that now roup is recognised as a blood disease, outbreaks on large commercial farms may be due to a deficiency in the mineral content of the food, more particularly in iron. Obviously, where 400 birds are run to the acre, or where the supply of green food is to any extent below the requirements of the birds, there is very grave danger of this, and it is a matter which well deserves our consideration. Therefore, I am sure Mr. Wait's very thoughtful article will be greatly appreciated by our readers.

"Interested" (Stratford-on-Avon) has asked my opinion of the following formula:—500 bran, 400 sharps, 400 Sussex grounds oats, 400 maize meal, 200 meat meal, 100 fish meal, and 8 of fine salt. This is used by a large poultry breeder in Canada.—In reply, I can only say it is a very expensive formula, and a very stimulating one. The percentage of animal protein I consider to be very excessive and quite unnecessary. It may be specially adapted to the very cold Canadian climate, but I should not care to use it here. One must also think of economical production, and on such a formula as this I do not think it could be obtained.

THE EAST ANGLIAN LAYING TEST.

Report for Eighth Month—From 30th April to 27th May, 1925.

The number of eggs laid during the month showed a decrease of 475; the total recorded being 3,121, against 3,596 for the seventh month. The size of egg showed a decline, the percentage of first-grade recorded falling from 77.9 to 75.

The check in the production is partly due to the increase of broodiness; the number of birds affected rising from 44 to 53, and although the light breeds were only slightly affected a number of them have taken a short rest which has also contributed to the decreased output. The main reason for the fall, however, is that the period of the seasonable increase is now past, and it will be surprising if the 3,000 mark is again passed during the remaining months of the test.

Two birds died during the month, the cause of death in each case being due to rupture of the oviduct.

The health of the flock continues to be excellent, with the exception of one bird suffering from disease of the liver.

W T. WILLIAMS, Hon. Secretary, Millfields. Rayne, Essex.

Figures are Total Eggs for Month and Total to date respectively.

Section 1. White Leghorns.—Dale, Egg Farm, 82, 662; Capt. E. A. Wheeler, 84, 588; Allen Bros., 109, 645.

Section 2. Any Other Non-Sitting Breed.—Miss Cavanagh (An.), 91, 610; Major R. Lloyd George (An.), 106, 563; T. R Berry (Sicilian Fl'bds.), 61, 333.

Section 3. White Wyandottes.—Misses D. and M. Keech, 83, 607; Mrs. Pierce-Grove, 78, 548; General R. L. Mullens, C.B., 62, 608

Section 4. Rhode Island Red.—H. Turner, 98, 774; A. Gawthropp, 107, 627; Miss E. Cavanagh, 104, 546.

Section 5. Any Other Sitting Breed.—T. H Sochon (L.S.), 66, 549; Misses D. and M. Keech (L.S.), 38, 447; F. D. Montgomerie (Bf. Rks.), 19, 156.

Section 6. Single Bird, any Variety Light Breed.—W S. Lane (W.L.), 17, 160; F. C. Tomlinson (W.L.), 22, 153; E. Fearon (B.L.), 22, 151; H Dearden (W.L.), 26, 140; Miss P. Abercrombie (W.L.), 22, 138

Section 7. Single Bird, any Variety, Heavy Breed.—Greensward Poultry Farm (W.W.), 28, 143; Mr. and Mrs. McMillan (R.I.R.), 20, 137; R Champion (W.W.), 23. 130; M. Moreton (R.I.R.), 24, 120; Mrs. R. D. Robinson (R.I.R.), 22, 116.

Note.—Five pullets in Section 1-5 constitutes a pen. One pullet in Sections 6-7 constitutes a pen.

HANTS COUNTY LAYING TRIALS.

Figures are Eggs for 10th period and Total Points to date respectively.

Section A.—Mr. H. R. Hunter (W.L.), 61, 4261; Capt. A. Munro-Spencer (W.L.), 61. 4061; Mr. A. F. C. Holdaway (Pen 1) (W.L.), 49, 3952; Mr. R. MacKenzie (W.L.), 57, 3720; Capt. P. H. G. Harper (B.L.), 45, 3657; A .F. C. Holdaway (Pen 2) (W.L.), 24, 3511.

Section B.—Mrs. J. H. Drew (Ut. B. Rk.), 49, 4717; Capt. D. V Gunston (Pen 2) (W.W.), 42, 3716; Mr. R. MacKenzie (W.W.), 42, 3689; Mr. H. R. Hunter (R.I.R.), 45, 3544; Mrs. Edwards (R.I.R.), 35, 3412; Mrs. J. H. Thompson (W.W.), 24, 3395

Some Fruit-Growing Notes

to help Poultry-Keepers.

By F. W. WHEELER, F.R.H.S.

STILL MORE FRAGMENTS.

I am sorry to have let a week or so pass by before continuing my fragmentary notes, and trust my readers will forgive the break. Unexpected outside events have made a heavy call on my time, but there, why any excuses? All poultry-keepers are busy men, and what a well-known member of the S.P.B.A. once wrote to me can, I think, be appropriately repeated here, i.e.:—" A poultry-keeper's life is the nearest known existence to perpetual motion," and to enlarge on this, I might add that if he does a little fruit work as well, he gets grease to make sure there is no stopping of the machinery. For all that, the combination of fruit and poultry work gives a pleasant variation, and after all the size of a business and its side-lines, with the necessary businesslike management, depends or success on the individuality of the man and his powers of organisation.

All this chatter will not help you to produce good ruit, so I had better switch off and turn on to somehing likely to be more useful. Well, suppose during he winter you have used the knife and saw rather reely on some old fruit trees, so as to remove crowded wood, and, to open out the centres, with the object f obtaining a better quality of fruit, you will find hat the result has been to cause numbers of twiggy hoots to break out in many places, for the vigour f a tree must have an outlet somewhere. These hoots cannot serve any good purpose, and will only gain crowd the trees and prevent the air and light oing its good work. If these growths have not been wiped off when very young, then the sooner they are ut away the better. Do not leave any base eyes to reak into fresh growth.

I have previously written several notes on the dvantages of summer pruning, so shall only give a few brief reminders to-day. Should new readers care o scan the more detailed particulars, I might mention that they appeared in "Eggs" for 11th July, 923, and 5th September, 1923. I specially dealt with the treatment of Cordon fruit trees in the issues f June 25th, and July 2nd, 1924, and the importance f Summer pruning with this system of growing choice fruit, for it requires more than simple Winter runing.

May I, therefore, to-day just briefly remind you to horten back the new growths to about six inches, particularly those at the lower part of the trees, here some will be found much stronger, and want a check. All laterals will, of course, be afterwards Winter pruned on the usual spurring system.

Some readers may have been working on the orette system of pinching back new shoots when oung in June, or early July, and have repeated that rocess as soon as the resulting side-growths break ut again. In which case they should, during August, e cut back to the basal buds. Fruit buds by this method are often produced on the current season's growth, which is not usual on laterals, except at the end of a young shoot, which, in the case of Cordons, is not where fruit buds are required.

As regards the bush or half standard trees, not fully developed, I think that a little Summer pruning, which has for its object the complete removal of new shoots growing where they will not be wanted, is work that will well repay for the time spent on it. For instance, where only room for one " leader " two may be growing, so the early removal of one, especially if an ill-placed shoot, is obviously a gain to the one left. Likewise while the trees are in leaf we can more easily note parts that are crowded, and which will be benefitted by taking away (not cutting back) superfluous new lateral growths. Many of these are likely to become coarse if left until the Winter pruning, and they keep much sunlight away from the fruit that is ripening, with a resulting loss of colour.

Unfortunately we all find our trees have branches or pieces of diseased or dead wood, and there is no time like the Summer months to remove these, while they are so easily seen. The quick removal for burning of such probable sources of what will spread a disease is likewise important to bear in mind.

THE SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

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Newman, Richard E., Sachetts Hill House, St. Peters, Thanet, Kent.
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So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year begins on 1st September.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, 31st JULY, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in quiet demand and cheaper, the average quotation having declined from 12s. 5d to 12s. 3d. per cwt. on the week. Imported wheats also meet a slow trade, and generally realise slightly lower prices. Home-grown feeding barley maintains recent rates, while at Hull, where only limited supplies are available, an increase of 4d per cwt. is recorded. Imported feeding barley is irregular, being slightly cheaper at Bristol, but at London, where a fair trade is passing, quotations have hardened. Small offerings of British oats generally make late rates, and foreign, which are in fair request, show little change in value. Spot supplies of maize are in moderate request, and prices have again advanced, the average quotation for Argentine being 10s. 9d. per cwt, as against 10s. 5d. last week.

A fair trade is passing for milling offals, and recent rates are generally maintained, while at London bran has advanced 2s. 6d. per ton, but at Bristol a reduction of 5s. per ton for bran is reported. Meals generally meet an improved demand, maize meals being again dearer. Linseed cake is in quiet request, but is slightly dearer at Bristol and Liverpool, while at London, owing to a good demand. English-made cotton seed cake has advanced 2s. 6d to 5s. per ton.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s.; Hull, £6 17s.: Liverpool, £7; London, £7 5s. Broad Bran: Bristol, £9 5s.: Hull, £7 17s.; London, £8 15s. Middlings—Fine (Imported): London, £9 17s. Coarse (British): Bristol, £9; Hull, £8 10s.; Liverpool, £8 5s.; London, £8 7s Pollards (Imported): Bristol, £7 17s.; Liverpool, £7 7s.; London, £7 10s. Rice Bran: Bristol, £7 17s.; Liverpool. £7 7s. MEAL.—Barley Meal: Bristol, £12; Hull, £11 13s.; London, £12 5s. Maize Meal: Bristol, £12 7s.; Hull, £11 5s.; Liverpool. £11 15s.; London. £11 10s Maize Meal (S., African): Bristol, £10 17s.; Hull, £9 10s. Liverpool; £10; London, £10 Maize Germ Meal. Bristol, £10 15s.; Hull, £10 5s.; London, £9 15s. Maize Gluten Feed: Bristol, £11 5s.; London, £10. Locust Bean Meal: Bristol, £9 15s.; Hull, £9 10s.; Liverpool. £9 10s ; London, £9 15s. Bean Meal: Bristol, £15 15s.; Hull, £11 13s.; London. £13. Fish Meal: Bristol, £20 10s.; Hull, £19; Liverpool, £19 10s.; London, £20 10s.

EGGS AND DEAD POULTRY.

Eggs have continued to meet a fairly slow inquiry, but an improved tone is reported with the advent of cooler weather; quotations are only slightly changed on the week, one or two continental descriptions having declined a little. The dead poultry market remains quiet.

Week-end prices.—Eggs (per 120): British, 17s.. 14s.; Irish, 16s., 14s. 6d.; Danish, 16s., 15s. 5d.; Dutch, 16s. 6d., 15s. 6d.; French, 14s. 6d, 14s.; Belgian, 15s, 14s.; Italian, 14s. 6d., 13s. 6d.: Lithuanian, 13s. 6d. 12s. 6d.; Chinese, 12s., 10s. 6d.; Russian, 12s. 3d., 11s. 6d.

Dead Poultry (per lb.).: Fowls—Surrey, 1s 8d, 1s. 4d.; Irish, 1s. 4d, 1s. 2d.; Others, 1s. 7d, 1s. 2d.; Ducks, 1s. 4d, 11d.

EGGS.

Per Doz.—Ashford: First, 2s. 1d : Second, 1s. 10½d. Birmingham: First. 1s. 8½d.; Second, 1s. 7½d. Bridgwater: First, 1s. 9½d ; Second. 1s. 7½d. Chelmsford: First, 1s. 9½d ; Second. 1s. 7¾d Colchester: First, 1s. 10¾.; Second, 1s. 7½d. Doncaster: First, 2s.: Second, 1s. 10d. Dorchester: First, 2s.; Second, 1s 11d. Exeter: First, 1s. 10d. Hereford: First, 1s. 7d. King's Lynn: First, 1s. 7d.: Second, 1s. 5d. Llandilo: First, 1s 7d.; Second, 1s. 6d. Mold: First, 1s. 9d.; Second, 1s. 8d. Newport (Mon.): First, 1s. 9d.; Second. 1s. 8d Norwich: First. 1s. 9d. Oswestry: First, 1s. 10d Penzance: First, 1s. 3d.: Second, 1s. 7d Saffron Walden: First, 1s. 10¾d.; Second, 1s. 7½d. St. Ives (Hunts): First, 1s. 8½d.; Second, 1s. 7½d. Salisbury: First, 1s. 9d.; Second, 1s. 8d Skipton: First, 1s 3d. Truro: First, 1s 8d.; Second, 1s. 7d. Welshpool: First, 1s. 10d. Second, 1s. 7d. *Carlisle: First, 2s. 2d. *Derby: First, 1s. 10s *Ipswich: First, 2s ; Second, 1s. 6d. *Lincoln: First. 1s. 9d. *Shrewsbury: First, 1s. 10d.; Second, 1s. 9d. *York: First, 2s.; Second, 1s. 11d.

FOWLS—Per lb.

Birmingham: First, 1s 4d.; Second, 3d Doncaster: First. †4s. 6d.; Second, †4s. Exeter: First, 1s. 4d. Hereford: First, 1s. 6d. Llandilo: First. 1s. 9d.; Second, 1s. 7d. Newport (Mon): First, 1s. 9d.; Second. 1s. 4d *Derby: First, †5s.; Second, †4s. *Ipswich: First, 1s 9d ; Second, 1s. 6d. *Lincoln: First †5s. 6d.; Second. †3s. 6d *Shrewsbury: First, 1s. 6d.; Second, 1s. 4d. *York: First, †5s.; Second, †4s. Truro: First, 1s. 5d.

DUCKS.

Per lb.—Birmingham: First, 1s. 4d.: Second. 1s 2d. Doncaster: First, †4s. 6d.: Second, †4s Exeter: First, 1s. 3d. Hereford: First, 1s 3d. Llandilo: First, 1s. 8d.; Second, 1s. 6d. Truro: First, 1s. 4d. *Derby: First, †5s.; Second, †4s. *Ipswich: First, 1s. 5d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers †per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, August 5th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to the poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

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Wednesday, August 12th, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN

(Founded in 1912 by RANDOLPH MEECH).

gistered at the G.P.O. as a Newspaper.
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Extract from absolutely Unsolicited Testimonial:— Bunchrew House, Bunchrew, Invernesshire, July 6th, 1925.

Dear Sir, I have received the "ECLIPSE" House, and am delighted with it. It is the best designed house I have yet seen, and I only wish I had known of it last year. Those who have seen it are equally pleased, not only with the design, but with the material used and the workmanship. I shall certainly recommend it to all my friends, and should I require another house I shall have an "ECLIPSE." Yours faithfully, BEATRICE A. FRASER-MACKENZIE.

PLEASE NOTE OUR NEW ADDRESS.

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—— EAST HARLING ATTLEBOROUGH, NORFOLK.——

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, AUGUST 12th, 1925.

Editorial.

AN AUSTRALIAN CHALLENGE.

The following cutting with the above title taken from the "Daily Telegraph," has been sent us by one of our readers:—

> "Professor Thomson, of Hawkesbury Agricultural College, Sydney, who is now on a visit to his native city of Aberdeen, stated, in an interview, that poultry-keeping in this country was worked on an obsolete system. In Australia hens gave 100 per cent. more eggs than the average hens in Britain. That was accounted for by the Australian system of breeding and feeding, and climate had nothing whatever to do with these results. If the Ministry of Agriculture or the Scottish Board of Agriculture took up his challenge, he would send them 100 hens that would produce double the quantity of eggs laid by hens in Great Britain. His college was the first in the world to test hens' laying averages, the production of eggs per hen at Australian laying contest being 220 per head for twelve months."

With all respect to Professor Thomson, we feel that closer acquaintance with conditions in this country ay induce him to modify his opinions.

We feel that he has either been misquoted, or that e is dealing in generalities. It is difficult to believe hat he would say poultry-keeping in this country is orked on an obsolete system if he were fully acquained with it, and understood the conditions.

What are we to understand by the assertion that ens in Australia gave 100 per cent. more eggs than verage hens in Great Britain? He certainly does not ean that the average hen in Australia lays 100 per ent. more eggs than the average hen here? What xactly does this challenge mean? We can produce ens (hundreds of them) which will lay double the umber of eggs produced by the average hen here? erhaps Professor Thomson will be a little more plicit, or tell us in what respect his interviewers ave distorted what he has said.

He is made to say that the Australian superiority entirely due to the methods of breeding and feedg, and the climate has nothing whatever to do with . Will Professor Thomson argue that climatic contions do not affect egg production, that abundance bright sunshine, if the birds are judiciously housed, not more conducive to a heavy egg yield than is the erage winter experienced in this country?

We are not arguing that conditions are ideal in Australia, but they are certainly more conducive to heavy egg production than they are over here. We are convinced that the Australian system of breeding would not vary greatly, if at all, from that found on a large number of English pedigree farms, and it is rather in the question of selection than in the actual mating of the stock that they perhaps excel

We now come to the question of feeding, to which reference has already been made, and which Professor Thomson claims is better than in this country. We believe we are correct in quoting the following as the mash used in the Laying Tests at Hawkesbury College:—60 per cent. Pollard, 20 per cent. Bran, 15 per cent. Lucerne Dust, 5 per cent. Meat or Blood Meal. Evening Ration: Two-thirds wheat and one-third crushed maize. Twenty-two ounces of salt was mixed to each 100lbs. of mash.

Professor Thomson tells us that climatic conditions have nothing whatever to do with the higher production of the Australian hen. We feel sure that if he brought those 100 hens to this country, and they were fed on such a formula as the one quoted above, and the 100 hens representing this country were fed as we should normally feed them, they would stand but a very small chance of laying 100 per cent. more eggs than our average hens. He must be aware that in the colder conditions which we get over here the expenditure of bodily heat is much greater, and that such a formula as that given above would be wholly inadequate for such production here, and we are confident there is no single manager of a laying test in this country who would not agree with us on this point.

If climatic conditions have no influence, how are we to account for the comparatively poor show put up by the Australorps which we have imported? In no single laying test have they compared favourably with our own breeds, although they have been imported as mated pens at great expense, and presumably from the best known Australian breeders. It cannot be denied that in view of the wonderful records which this breed has put up in Australia, that over here they have been something in the nature of a disappointment. How is this to be explained? There are only two possible explanations: The one is that climatic conditions in this country are not so conducive to high records as in Australia, and the other we leave to our readers.

Coming now to the laying tests, Professor Thomson has stated the production of eggs per hen at Australian laying tests was 220 per head for 12 months Perhaps a closer comparison of the laying tests held in this country, and in Australia, would go to show that the

(Continued at Foot of Column Next Page).

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

CO-OPERATIVE MARKETING.

I have received from Mr. J. McDonald particulars of the Cape Egg Circle, Ltd,, which is registered under the Co-operative Societies' Act.

Some of the bye-laws are rather interesting, and as the Circle is a complete success, perhaps it would help Co-operative societies in this country if these rules were adopted. True, they are a little stringent, and at the start might prevent a certain number of people from joining such a society, but, sooner or later, if those responsible for its direction persisted, I am confident that many would be obliged to come in.

One of the most important of the bye-laws is that "Every member shall be bound to deliver to the company the whole of his production of eggs, with the exception of those required for his own household use, or required by him for incubation or sold for incubation purposes."

(2) " Every member is to pay into the funds of the company a fine of one shilling for every dozen of eggs which he fails to deliver in accordance with the last preceding regulation."

"Dirty or stale eggs shall not be received by the Depot manager. Any member who delivers dirty or stale eggs shall be warned on the first occasion. For a second offence will be fined 5s., for the third 10s., and on repetition of this offence will be expelled from the company, and his shares forfeited."

I do not remember ever having seen these in the bye-laws of any Co operative Society in this country.

No doubt it would meet with considerable opposition here from a large number of people who believe that Co-operative Societies are merely a dumping ground for all their surplus eggs. If our societies were to definitely state that they would not take dirty eggs, and would confiscate all stale eggs if they did not care to impose a fine, or feared that if they did so it would prevent their obtaining members, it would at least save them considerable loss.

No. 8 is also a rule which might well be adopted by many of our societies. It is:—

"When a member sends in a consignment containing bad or stale eggs, the bad or very stale eggs will be deducted, and the remainder of the consignment will be subject to a reduction of at least 33 1/3 per cent. as these eggs will not be sold as fresh eggs. but as cooking eggs, at a reduced price.

No. 9 would be a rule which surely could be adopted by our Co-operative Societies, viz.:—

" Eggs will be paid for by weight on the basis of 24ozs. to 12 eggs."

That would prevent individuals using the Co-operative Societies as a dumping ground for their small eggs, and the percentage of these usually received is very high.

The suggestion that Packing Depots may be formed, consisting of at least five members, who must send their eggs to the Head Depot collectively is also an excellent one.

I understand that the Cape Egg Circle has been very successful in securing the loyal and honest support of their members after certain initial difficulties. When a member's egg supply dropped, with no reaso being given, a letter was sent offering the services an advice of an expert to assist in restoring the egg flow and this was effective.

The report recently issued by the Ministry of Agri culture demonstrated that the two weak spots in Co operation in this country are:—First, the want o loyalty of the members to the societies, and, second to lack of stringent rules which did not impose an penalty for the dishonesty, for we can call it no othe name, of some of its members.

BROODERS.

I received two rather interesting letters this mornin in reference to brooding. One is from Mrs. Burgess who writes as follows:—

> "With regard to the correspondence appearin each week in 'Eggs' referring to leg weaknes and crooked breast-bones, it may interest you t know that I have not had a single case of eithe this year, and only three cases of leg-weaknes last year. I only rear a comparatively sma number of chicks (280 this year) in sma unit houses under hovers, and also several type of brooders. I put lathed fruit trays under th hovers. covered with hay, and underneath is dam soil which is raked over each day, and a littl lime sprinkled on it. The chicks are reared i small batches, 50-75, under 100 chick-size hove fed on your formula, with the addition of the lim and salt mixture."

The second letter has reference to a brooder whic was ventilated on this system, and which I reco mended to one of our lady members to try. She no writes as follows:—

> "I can only say that it is far and away the be that I have had anything to do with, and I hav never had any trouble with leg-weakness. fact, I have never had a more healthy lot

EDITORIAL.—Continued.

Australian hen is not so much a better producer tha our own birds, as Professor Thomson imagines.

Is the Australian laying test run for 48 or 52 week

How many breeders are competing?

How many breeds or varieties compete in this tes

What is the average number of pens competing compared, say, with the National Test at Bentley, the Harper-Adams' Test?

These are all matters on which we should like i formation.

chickens than I have had this year. It must be due to the good atmosphere in the brooder."

Several letters have been received during the past wo or three months to this effect, and I am only pub-ishing these here to emphasize the importance of ure air in the brooder, and the mischief that has been lone in previous years through neglect or failure to ecognise that the terrible atmosphere in which we ttempted to rear chicks was responsible for a great leal of the heavy mortality.

Since attention was drawn to this through the olumns of "Eggs" many members have written to tate how greatly have been improved the results by dopting the method advised.

BLINDNESS.

I wonder if any of our members can give me infor-ation in regard to hens going blind. One or two uestions have been asked me on this subject of late, nd I have been wholly unable to explain the cause. he following is a quotation taken from a letter re-eived from one of the members:—

> "There is no suggestion of growth or film forming. The eye is perfectly healthy in every way except that the pupil gradually contracts, and the reddish colour fades out of the iris, leaving it a pale green. I have a Wyandotte hatched last year, both of whose eyes have been affected for some months. Another Wyandotte has one eye affected. A Black Leghorn, which started long after the first Wyandotte mentioned above. had to be killed a month ago, as she became quite blind. One Rhode pullet completes our present list."

A similar letter was received from another member out the same time, and several such cases have me to my notice during the past few months. There-re, I think it is worthy of investigation, and perhaps me of our members can give me some information the subject.

EARLY HATCHING.

Miss Argles has written me as follows on this estion. We will see how completely her views differ m that of Mrs. Walrond:—

> "Dear Mr. Newman,—The controversy in 'Eggs' re early-hatched pullets interests me greatly. I keep only a very small poultry farm, principally for stock birds, White Wyandottes and White Leghorns, and, regarding the value of early-hatched pullets I have no two opinions. They mature well, lay early, and lay long. It is true eggs are small at first, but so are March eggs. It is a rare bird that lays a two ounce egg to start with, and lays many! Certainly regarding Wyandottes. If the pullets moult in the autumn, it means November, and not four weeks, and after the moult they are fine breeders. I think it is contended by one expert that early birds do not attain a good size, and eggs are always small. If he reads this he may say I am wrong!
>
> Now to prove the above statements. At this moment I have 17 pullets laying, hatched January 23rd, or within a day or two. This morning there were seven birds in the trap, and I weighed all, so it could not be a matter of choosing:—

WHITE WYANDOTTES.

	Date of Laying.	No. laid to date.	Weight.
No. 3.	23rd June	22	4¼lbs.
No. 4.	10th July	10	4¼lbs.
No. 5.	9th July	17	4¼lbs.
No. 6.	25th June	19	5lbs.
No. 13	21st July	7	4¾lbs.

LEGHORNS.

No. 2	14th July	14	4lbs.
No. 3.	16th July	5	4¾lbs.

> The Leghorns are going to be too large I think. I made up two White Wyandotte pens in the Autumn, 1924, of January and February hatched pullets, all laying 2-2¼oz. eggs."

LANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES' LAYING COMPETITION.

Held at the Lancashire County Council Farm, Hutton, under the supervision of Mr. C. H. Dobbin, the County Poultry Instructor.

All the birds are now in good health, no fresh cases of roup during the month. Three birds still remain in hospital more as a precaution than anything, and are being trap-nested Nine of the birds have laid 200 eggs or over, viz.:—W. Leghorns: Nos. 18, 27, 38, 39, 62, 97; B.L., 112; W.L., 143; W.W., 37; and fourteen birds have laid between 190 and 200 eggs.

Tenth Month Report—25th June to 22nd July, 1925.

The following are the leading positions in each section, showing number of eggs and points for the ten months:—

Section 1. White Leghorns. Large Breeders (Three Birds).—R. Beesley, 575, 3148; J. Booth, 583, 3104; E. Cam, 532, 2990; A. C. Harrison, 536, 2884; W. Hammett, 499, 2834; R. Moon and Sons, 524, 2672.

Section 2. A.O.V. Light Breeds, Large Breeders (Three Birds).—O. Rawlinson, 561, 2833; Mrs. J. H. Hill, 402, 2015; J. P. Willacy, 378, 1860; F. Lord, 388, 1798; H. Hilton, 356, 1714; W. Hamnett (one dead), 317, 1654.

Section 3. White Wyandottes, Large Breeders (Three Birds).—C. Bates, 531, 3014; Mrs. S. Sefton, 499, 2578; W. Hamnett, 458, 2570; J. R. Dawson, 450, 2534; F. Holden, 435, 2335; P. Williamson (two dead), 380, 2889.

Section 4. Heavy Breeds, Large Breeders (Three Birds) F. Harvey. 572. 2857; W. Weardon and Sons, 495, 2649; T. Edmundson, 465. 2557; T. Braithwaite, 423, 2416; A. T. Walker (one dead), 422, 2319; T. Barron, 425, 2302.

Section 1. Light Breeds, Small Breeders (Single Birds).—W. Fletcher, 180, 985; J. Stanley, 165. 980; F Wilkinson, 209, 977; G. A. Wolstenholme, 173, 953; H. W. Makant, 193, 949; H. West, 174, 941.

Section 2. Heavy Breeds. Small Breeders (Single Birds.)—J. W. Pearson, 193, 1125; D. Braithwaite, 178, 916; A. D Walton, 172, 816; H. Harrison, 158, 793; T. Plumb, 159, 772; W. R. Robinson, 132, 761.

BRIGHTON STOCK TEST REPORT.

JUNE, 1925.

Figures are total first-grade eggs to date.

R. Mummery (11 W W.), 1253; Besford Egg Farm (9 W.W.), 1288; Countess Buxton (14 W.W.), 1836; Chisbury Poultry Farm (13 W.W.), 1819; E. Soames (9 R.I.R.), 1356; Capt. Woodward (13 R.I.R.), 1979; B Glendenning (5 R.I.R.), 741; Capt. Close (13 W.L.), 1751; Miss Allen Smith (13 W.L.), 1880; B. Scott Miller (8 W.L.), 1198; Capt. Becket (12 W.L.), 1748; Mrs. Gibson (13 W L.), 1818; Chisbury Poultry Farm (10 W.L.), 1356; D. Brown (10 W.L.), 1368; Major Shepherd (15 W.L.), 2050; D. W Gunston (12 W.L.), 1707; Dukes Poultry Farm (16 W.L.), 2198; W. Bradbury (16 W.L.), 2342; Miss Ransford (15 W.L.), 2002; Mrs. Gibson (16 B.L). 2242; Dukes Poultry Farm (18 B.L.), 2370; Miss Allen Smith (12 B.L.), 1643.

Answers to Queries.

By the **EDITOR.**

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

H. V. (Loughborough) asks why so many of his Black Leghorn pullets have dark-coloured legs, and wishes to know whether this is a sign of an outcross. This point has been repeatedly explained in "Eggs" on many occasions. When the Black Leghorn was "made" it was definitely stated that it was quite impossible to breed a pure black bird with yellow legs, and, in spite of all the criticism which this statement aroused, it has proved to be true. The yellow leg is comparatively easy to breed in the cockerel, but the more intense the yellow the lighter is the under-colour, and we often get white in the flights and tails. Black pigment appears to be to a great extent lacking in the male, while in the hen there is a deficiency of yellow pigment, and an excess of black pigment. I do not think it is possible to breed a good yellow-legged male with sound black plumage. It is sure to be light in under-colour, or show white in the tails or flights, while in the female, when one sees a good yellow-legged specimen, the under-colour is not so dense a black. The dark legs then are not a sign of outcrossing, but undoubtedly in mating strains of Black Leghorns the Minorca was used.

B. L. (Forest Side) wishes to buy a breeding pen of Wyandottes, and asks what records I would recommend. For the hens it would be best to get birds with records of 180-210, with winter records of not less than 40 eggs, and for the cockerel I should recommend one from a dam with a record of 240 eggs, and a winter record of 50, and he should be careful as to size of egg, stipulating that those of the dam from which the cockerel was bred, should have been 2¼ozs. In answer to his further question, if he bred from these in early January he could use the pullets bred i January and early February as breeders the follow ing season. His best plan would be to select ther on the records they made in the first eight weeks fror the date of laying the first egg.

R. P. D. (Cumberland) writes to say that many his birds are suffering from diarrhoea, and that th combs are very dark. His mash is as follows:—Fou parts middlings, one biscuit meal, one maize mea and one fish meal. The birds are on free range, an are given oats and wheat in equal parts as grain fee The cause of the trouble would be the excess of anim food, and he is advised to cut this down to one-thir as even that comparatively small amount would sufficient as the birds would supplement it by th insect life which they would find. His mash at pr sent is very wasteful. There is no reason to suppo that the quality of the fish meal is the cause of t trouble. It is the excess in this case.

"Moulting" (East Yorks) being anxious to get h pullets through the moult early in order to obta winter eggs, has adopted rather drastic methods, wi the result that the birds are hanging in the moult. have always written against the starvation method causing the birds to drop their feathers, and as far as have been able to discover no great advantage derived from it, as we do not get more winter egg Where such drastic methods as those adopted by n correspondent are used, much mischief is often don the birds hanging in the moult, and frequently taki a very long time to recover from it, with the resu that egg production suffers very materially. I sugge he tries the following formula:—1lb. alfalfa me 4lbs. good white middlings, 2lbs. maize meal 1 S.G.O., ½lb. soya bean meal, and ½lb. fish meal, a to this add six ounces of linseed meal. Shelter t birds from the hot sunshine, and supply them wi plenty of fresh green food. I would just here like point out that to expose moulting birds to the dir rays of a hot sun is very injurious.

E. G. (Newcastle) writes that he has a valua Wyandotte hen, whose abdomen has become swoll and almost touches the ground, and the bird wadd about like a duck. In other respects she looked qu healthy. My correspondent wants to know how treat the bird. In reply to his query, this is what known as "down behind," or a broken-down abdom and is due to muscular weakness. I am afraid it i case in which he can do nothing, but as a breeder bird will be of no use. She may remain in perf health and produce eggs for some time. In some ca this trouble is due to over-production, and it see more common in very highly fecund birds than moderate layers. Frequently it is due to too fa condition.

POST-MORTEMS.

B. D. If you had read the conditions under wh post-mortem examinations were undertaken S.P.B.A. members, as published in "Eggs," would have seen that replies are only sent by p and not answered in the columns of that paper.

cause in the case of the pullet submitted for examination, was internal haemorrhage from rupture of the liver. There was a large bruise on the abdominal wall immediately over the liver, showing that some form of external violence was the cause of the rupture.

T. O A. The post-mortem examination showed that the turkey was affected with both Coccidiosis and Chicken-pox. These are two separate and distinct diseases, the former being caused by the Coccidial parasites, the latter by an ultra visible but filtrable virus, the exact nature of which remains to be discovered. Both these troubles are diseases of chickens as well as turkeys, and I should strongly advise you to remove the growing chickens you mention as far away as possible. Clean out and disinfect the houses, especially the floors every other day, burning the litter and the droppings. Dissolve one dram of powdered Catechu in every three gallons of the drinking water for one month, and allow no other. Paint the pox "growths" with carbolic acid one part; olive oil, 10 parts, every other day.

THE NATIONAL UTILITY POULTRY SOCIETY'S EGG-LAYING TEST, 1924-25.

Report for the Ninth Month—13th June to 10th July, 1925.

Very hot weather was experienced throughout the ninth month, with the total absence of rain, and the drought in this district, which usually suffers from a very light rainfall, has now lasted for over seven weeks, and the runs are consequently very badly burnt.

Although no deaths occurred as the direct result of the heat, it found out the weakly birds, and the deaths of ten are to be reported Broodiness was almost as much in evidence as during the previous month, 615 birds in all being affected—of these 556 were of the heavy breeds, and 59 of the light. Moulting has commenced much earlier than usual, and is becoming very general, doubtless owing to the excessive heat.

Egg-production under such circumstances suffered, and the records show a further decline, the average falling to 14.81 eggs per bird, as against the previous month's average of 16.75. This falling off was shared by all breeds, but it is interesting to note that it was again least pronounced amongst the black plumaged birds—Black Leghorns and Australorps both putting up averages of over 17 eggs per bird. The total number of eggs collected on the first day of the month was 1,191, and the last day 1,069.

There was no change in the leading pen in any section. The highest individual record of first-grade eggs is 207 eggs, scored by Major Thorne's White Leghorn, No. 724, which has also laid five second-grade eggs, making a total of 212; and by Mr. Roland Garrett's Black Leghorn with a total of 208 eggs (one second-grade). The general health of the flock is very good, and there are no cases of infectious disease.

Figures are total score to date

....**Section 1. Championship** (Ten Pullets).—G. B. Metcalfe, Lechlade, Glos., 1675; Frank Snowden, Cowling, Keighley, 1584; Leslie Williams, Liss, Hants, 1507; Miss Nellie Bell, Ightham, Kent, 1486; Richard Rodwell, Nelson, Lancs., 1470; G. B. Metcalfe, Lechlade, Glos., 1465.

Section 2. White Leghorns (Five Pullets). Mrs E. A. Pallant, Ipswich, 820; Mrs. E. M. L. Knight, Salisbury, 807; Balsham Manor Farm, Cambridge, 802; Easton P.F., Norwich, 799; G. Keith Simmons, Honiton, Devon, 799; Miss Ruth Crawford, Lowesby, Leicester, 798.

Section 3. Black Leghorns (Five Pullets).—Mrs. Mignon E. lay, Long Preston, Yorks, 794; E. Watkins, Cross-in-Hand, Sussex, 1; The Misses Allday and Rawson, Peterboro, 767; C. L. and .A. Thomson, Holywell, N. Wales, 764; Roland Garrett, Wheatampstead, Herts., 750; W. P. White, Colne, Lancs., 742.

Section 4. Any Other Light Breed (Five Pullets).—P. K. Berry, arket Harboro, 791; Molassine Co., Ltd., Twyford, Berks, 734; H. Thompson, Alton, Hants, 699; J. E. Hughes, Ware, Herts, 3; J. B. Joy and Co., Rotherfield, Sussex, 656; Robert West, hornton-le-Fylde, 628.

Section 5. White Wyandottes (Five Pullets).—A. K. Spiers lexander, Roughton, Norwich, 877; G. Keith Simmons, Honiton, evon, 847; W. and T. Salt, Leicester, 821; J. T. Finn, Mayfield, arple, Cheshire, 796; Chisbury Poultry Farm, Godalming, Surrey, 9; Miss Hastings Irwin, Colchester, Essex, 784.

Section 6. Rhode Island Reds (Five Pullets)—John H. Berry, tery St. Mary, Devon, 848; J. B. V. and W. Cummings, Carlops Penicuik, Scotland, 793; Arthur Gawthropp, Northampton, 780; Lady Dorothy Fraser, Leicester, 777; John Beamish, Dolgelly, North Wales, 769; Wilson Beattie, Rotherthorpe, Northants, 751.

(Continued at Foot of Next Column).

Section 7. Sussex (Five Pullets).—Mrs. E. M. Knight, Salisbury, 757; T Brooksbank, Hedon, E. Yorks, 723; F. Rossal-Sandford, Shrewsbury, 710; Mrs. M. G. Alston, Buntingford, Herts, 707; H. S. Godsmark, Ashford, Kent, 691; Mrs. M. B. Cowley, Abingdon, Beds., 680.

Section 8. Any Other Heavy Breed (Five Pullets).—A. M. Kemp-Gee, Chesham, Bucks, 730; Mrs. M. Crookes, Upper Deal, Kent, 719; A. A. Plimpton, Beverley, Yorks, 719; Marchioness of Graham, Isle of Arran, Scotland, 711; Miss Harrison Bell, Welwyn, Herts, 705; W. C. Crossland, Sheffield, 701.

Section 9. Members N.U.P.S. (Two Pullets).—Mrs. F. O. Ward-Jackson, Kingsland, Herefordshire, 328; Samuel Hufton, Derby, 274; George Hampton, Chester, 269.

Section 10. Teams of Five Pullets.—Tottenham Utility Poultry Society, London, 625; Progress Utility Social Club, Bury, Lancs, 580; Bethnal Green Utility Poultry Society, London, 577.

Roup—Some Impressions.

By **FRED W. WAIT.**

(*Continued.*)

Swollen eyes are frequently present, and are a source of trouble. The cleft in the roof of the mouth appears to be the starting place, from which it spreads upwards through the head.

On every occasion, when the bird is handled, this spot should be carefully examined, and any cheesy matter removed with some blunt instrument, tincture of iodine being painted well inside the whole of the cleft. Dry mash may be mistaken for cheesy deposit unless carefully examined.

It is absolutely essential that the birds be enabled to partake of food regularly, otherwise exhaustion and death quickly intervenes. In the case of fat heavy hens they will exist for some considerable time, but thin, lean hens in hard condition through heavy laying, quickly fall victims.

There is no doubt that swollen eyes are in many cases the preliminary cause of death. In the majority of cases it will be found that in the corner of the eye there is a hard cheesy substance often as large as a pea. It is necessary that the eyelids be carefully manipulated, and this substance removed, otherwise there is little hope of reducing the swelling.

Boracic acid lotion and potassium permanganate may be used, but these do not appear to be very reliable. Fair success has been obtained with a one per cent. solution of Collargol (Martindale), two drops being placed into the eye by means of a fountain pen filler. If both eyes are closed feeding becomes impossible.

Just one word with reference to the manner in which roupy birds are killed. I have seen poultrymen break their necks just in the ordinary manner, consequently liquid or semi-liquid matter of a highly contagious nature has been squeezed from the bird's head on to the attendant's clothes or upon the surrounding ground to create a further spread of the disease.

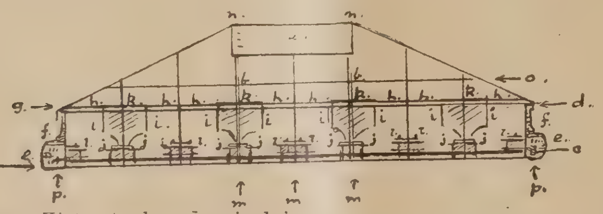
In all cases the head should be covered with a piece of cloth or soft paper, which together with the bird should be immediately burned. One point which I have noticed is that once a bird is in a convalescent condition recovery is remarkably fast if accompanied with a good appetite, neither have I noticed any further return of the complaint, or any other weakness.

The Egg Factory.

By A. MORTON NANCE.

The intensely interesting and instructive serial article recently running through "Eggs" has suggested to the writer of this article that to be in keeping the egg laying machine should be placed, like other machinery, in a factory, hence the title which I shall give to the structure I am about to describe.

To meet present conditions my aim always is to concentrate the work of the Poultry-farmer, otherwise Egg Manufacturer, under one roof for two main reasons, easy working and cheaper construction. The building, when completed, will combine storage of both water and the raw material, with their conversion into the finished article. In the first place, I will explain the construction of the factory by means of the following sketch:—



(a). Water tank, galvanised iron.
(b). Water pipes, with taps fixed to 4ft. x 2ft. uprights.
(c). Line of water trough end to end and front and back.
(d). Line of guttering.
(e) Butts.
(f). Short downpipe to butts.
(g). Floor of mixing loft.
(h). Perforated iron grids in floor for feeding grain—raise grids to hang greens
(i.) Hopper boxes, any size required.
(j). Batten-edged economical trough, any length.
(k.) Traps in floor which are lids to hoppers.
(l). Roosts, droppings-boards and trap-nests. front to back.
(m). Stout uprights supporting tank and strengthening building.
(n.) Lead-flashing round edge of tank and roof.
(o). Line indicating tops of bins.
(p) Cock and pipe to water trough.
(q) Scratch lights under water troughs.

The tank may be provided with a cover for preservation during the dry season, secured from the effects of storm by proper fastenings. Passage-way must be arranged at one end of hopper box, and nests in the smaller sized factories, with half wire between door.

In the larger sizes a passage three feet wide runs between sections. These are more suitable for intensive farming. Alternately, if preferred, the birds may be made to roost at the backs of sections, or at partitions parallel with front and back of the building. Draught screens should be provided at sides of roosts nearest the front ventilators, if placed at right angles to them.

Three feet of the partitions next the upper floor is wire netted for free circulation of air.

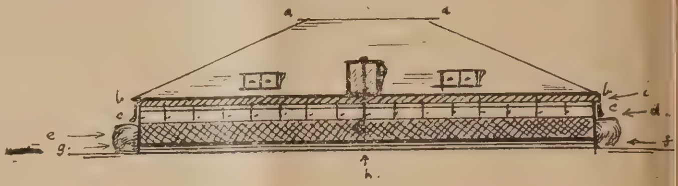
Between the grain-feeding grids, the mixing is done and the mash shovelled into the hopper boxes, what remains being swept in with a brush which is used specially for this purpose. When filled, the mash in the hopper boxes will last a great length of time.

The floor of the mixing loft must be kept scrupulously clean, all dust and other sweepings collected in suitable trays, and emptied into a dustbin for removal.

Eggs when collected may be cleaned, graded and stored for marketing in the loft, the incubation eggs being separated, if breeding is being done, for transference to the Incubator Room.

Dead stock may be plucked, drawn and trussed, and, in fact, all the practical part of the Egg Manufacturer's work done here.

The next sketch is of the elevation—back and front and four sides, if square in shape.

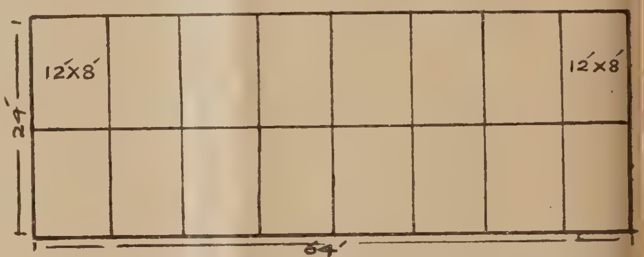


(a). Ventilators (outlet), either side tank.
(b) Guttering.
(c). Short downpipe to butts.
(d). Lights with ventilators (intake).
(e) Wire netting or wood, for sheltered or exposed position.
(f). Scratch lights.
(g). Water trough, pipe from butt either end.
(h). Pulley chain and grip for storing.
(i). Weather-hood.

A step or rung ladder is used for mounting to the loft. This is easily removed and laid on its side when not in use.

It is now an increasingly popular idea that the ideal number of hens to work in one section is twenty-five, but the plan should be varied to suit various opinions.

Here is the floor space:—



Another form would be 14 sections, each 9ft. x 11ft., or 63ft. x 22ft. over all. These cabins would hold, in all, 400 birds, and it is easy to multiply to get one's requirements.

In the large type of factory, where lights and ventilators would be made on all sides, one could always keep the place well ventilated in all weathers, and the light would penetrate to the inside sections through wire netting at partitions.

As to cost, we will assume £350 to £400 to be a moderate charge to house 1,000 head of poultry. The Egg Factory should, I think, be completed for £250 to £300, and the saving in labour and repairs would tell considerably.

The saving in time is a consideration, as the Egg Manufacturer could pay attention to fruit growing, bee-keeping, and grow green for his stock, all of which is out of the question at present. Then one thing with another, season for season, will bring him nearer his goal of independence.

(We recognise that the ideas put forth by Mr. Nance in his article are revolutionary, or, shall we say, very original. We have, therefore, published it in the hope that our readers wil comment upon it, and we ask them at the same time to remember that because it is revolutionary or original, whichever term they may choose to use, it is not necessarily impracticable.—Editor).

Modern Poultry Feeding.

By TOM NEWMAN.

FISH MEAL AND MEAT AND BONE MEAL.

I have received the following letter from Mr. W. J. Golding, the well-known Buff Orpington breeder:—

> "I was very pleased to read your remarks in 'Eggs' last week, calling attention to the inferior quality of fish meals now on the market, and I am sure poultry-keepers generally will greatly appreciate what you have done for them by giving this matter such prominence.
>
> It is, however, hardly necessary for me to point out that poultry-keepers have a very simple and effective remedy in their own hands, viz., discontinue to use fish meal altogether."

While I very fully appreciate Mr. Golding's comments on my remarks, I am sorry that I cannot advise my readers to follow the very simple and effective remedy which he suggests.

Fish meal is an excellent and valuable food, and there is no reason why, if purchased from reputable manufacturers, and a little discretion is used, it should cause any trouble.

I have repeatedly pointed out in these columns that an excess of oil is one of the chief causes of trouble. The oil content should not exceed four per cent. If there is an excess of oil this is easily determined by placing a sample on a sheet of clean note paper. If this becomes greasy then the oil is in excess, and the meal should not be used. The only other trouble is excess of salt, and a guarantee should be obtained that this does not exceed four or five per cent.

If buyers would only exercise these very ordinary precautions, the poor samples of fish meal would soon be driven off the market.

Mr. Golding expresses a preference for a good quality meat and bone meal. That is a matter of opinion, but may I point out to him there are as many bad samples of meat and bone meal and meat meal on the market as there are fish meal. In every case the buyer must exercise his discretion. Only recently I have been investigating a case where a bad sample of meat and bone meal caused an outbreak of diarrhoea in a commercial flock, with the result that most of the birds were thrown into a moult. The most simple and effective remedy in our hands is to know what every poultry-keeper should know—the difference between a good and bad sample of meal. Certainly it is time we took action to secure from the Government the prohibition of the sale of many of these fish meals and meat and bone meals as poultry foods.

A FORCING DIET.

At this season of the year I get the usual number of letters with reference to precocious pullets. February and early March hatched pullets are beginning to lay, and in 90 cases out of 100 this is attributed to the feeding, and the question is asked: "Is the feeding too forcing?"

In about three months' time the tone of the letters will be changed. Readers will be complaining that pullets are late in coming into lay, and will ask whether they should add more fish or meat meal to the mash.

First, let us deal with this so-called "forcing feeding." As I have so repeatedly explained, this precocity or early maturity is a highly inheritable factor, and is to a great extent affected by the date of hatching. A pullet hatched in early February will normally start laying at an earlier age than her sister hatched in early March, and the March-hatched pullet would, in her turn, start laying at an earlier age than her sister hatched in early April.

The effect of the feeding upon early production, except it be of a highly stimulating nature, is very small, and it can only have a temporary effect. If a bird was on the eve of laying, a stimulating mash might cause her to lay a few days earlier, but however stimulating a mash may be, it could not cause her to lay a few *weeks* earlier.

In watching a brood of chickens bred from one pen, and reared exactly under the same conditions, you will often find that the earliest pullet will begin to lay at five months old, and you may watch them in the different stages, beginning some a fortnight later, and some even two or three months later. This indicates, surely, that this early production is largely a matter of inheritance and not one of what is commonly said to be "forcing feeding."

There is the question as to when a diet *does* become forcing. A highly fecund pullet will normally lay five or six eggs a week during the flush season. The diet which was sufficient to enable her to produce her three or four eggs a week in November, now may become too stimulating, and frequently from this cause we get shell-less eggs and prolapsus of the oviduct.

A high percentage of animal protein does not necessarily constitute a forcing diet. In the States they usually use at least twenty per cent. in a mash. Here we are content, or should be content, with a much smaller percentage which gives us equally good results, and is a far more economical feed.

When commercial egg farming was first started in this country it was customary to use as much as 25 per cent. of fish meal in the mash, with the result that the kidneys were affected, and it was quite common to see on many of the large commercial egg farms a number of birds with black-tipped combs, which was mistaken for liver disease.

Now that we have modified our ideas in this respect, we have not only less trouble, but have certainly healthier birds.

Correspondence.

THE IMPORTANCE OF PROPER VENTILATION.

To the Editor of "Eggs."

Dear Sir,—Your readers will doubtless appraise at its right value the importance of the article which appears in "Eggs" of July 29th, under the above heading, and all I propose to do, with your permission, is to devote a few remarks on the subject of the concluding paragraph, which reads:—

> "I expect these views will be opposed from many quarters. The appliance maker will not want to change his pet model, which he has exhibited at the shows for years. Neither will the house-owner like to realise that his existing houses conform to no principles whatever. But perhaps these serious outbreaks of disease will force us to realise what the London cab horse owner did forty years ago."

As I see it, sir, the appliance maker will have no option in the matter whatever. He serves the industry, and is, incidentally, in so doing reaping quite a good profit. As the servant, and not the *master* of the industry, he must supply the industry with what it requires—in other words *properly ventilated houses;* and, moreover, we have a very simple method of coercing any that might prove recalcitrant in this matter, by the National Poultry Council laying down what, in their opinion, constitutes the most perfect system of ventilation for poultry houses, and *issuing a certificate yearly* to all those appliance makers whose houses conform to this system. Readers of "Eggs" wanting new houses will naturally place their orders with those appliance makers who advertise that they hold this certificate in regard to their houses. Appliance makers are no fools, and they will very soon tumble to it, which side their bread is buttered; moreover I do not think that they *want* to market a badly-ventilated house. They are simply marketing what has seemed good enough hitherto, but the S.P.B.A. wants something better now, and if the National Poultry Council will define that want, as suggested above, we shall get it without any trouble. It is simply a case of "Get on or get under" with the makers.

As regards the house owner, we need not worry too much. If he is of the ostrich type he will bury his head in the sand, but if he is wise, and all readers of "Eggs" show their wisdom by that fact, he will see to what extent he can improve the ventilation of his existing poultry houses, and in the future get houses with a certificate.

I *quite* agree that the lean-to type of house has nothing to recommend it, unless it be that it can be more cheaply constructed, and even then its cheapness is dearly bought.

"LIGHT SUSSEX."

RABBITS.

To the Editor of "Eggs."

Dear Sir,—I was somewhat surprised to read in July 29th issue of "Eggs," that Lady Rachel Byng considers oak leaves should be avoided in feeding Angoras.

I have found them very useful for other breeds of rabbits when there has been any tendency to scours. I may also say I have not found buttercups deadly poison. I would not actually feed them, but have not found them to do any harm among other food.

Yours faithfully,
M. E. ACKERLEY.

BEE KEEPING.

To the Editor of "Eggs."

Dear Sir,—In your issue of May 28th, 1924, "Confido" made a few criticisms of the articles written by Mr. Madoc. Being a novice, I wish to thank him first of all for his mention of Mr. Digges, from which I have gained much valuable information, and, incidentally, been saved both time and money.

If this note should catch the eye of "Confido" I should be glad if he could give, in reply, some further particulars of his mammoth (26 frame) hives. I have put one into use this season, built for the frames to rest on the hive walls, and find it rather difficult to manipulate. On the other hand, although only started with a cast, strengthened with brood, two frames on two occasions (four frames in all), and by spreading the brood, an enormous colony has been built up, and a larger quantity of surplus honey will probably be taken. Such a thing would hardly have been possible in a 11-frame hive; and it is this fact that rather induced me to try the scheme out further next season. Any information, therefore, which your correspondent will give will be very much appreciated by

Yours faithfully,
ARTHUR J. RUSSELL.

AEROPLANES AND POULTRY FARMS.

To the Editor of "Eggs."

Dear Sir,—In reply to "P.C., N.U.P.S." in "Eggs" of July 22nd:—I have not found any inconvenience or loss in egg yield. My farm is situate a mile from an aerodrome, and is in the direct line of the Croydon to Paris route; many machines are always about, and there is frequent night flying. My birds are born in their midst, and, therefore, accustomed to them.

Faithfully yours,
S.P.B.A.

THE CONDITION OF ENGLISH EGGS.

To the Editor of "Eggs."

Dear Sir,—I have little time for additional letters, ut seeing report of complaints from Smithfield of ondition of eggs from English supplies, I am comelled to reply, and I can hit the nail on the head.

I supply a large London store of high repute reguarly twice a week. and often have a surplus, which I ither send to London (Smithfield) or Birmingham Smithfield), *whichever firm have sent me empty ases.*

I now never send my own cases, because it usually akes *three weeks* to return, and then in a damaged ondition, or a portion of refills missing. I did that nce, and that the last (others confirm this).

My London store return empties *at once*, and even o as far as to enclose in case my addressed label, hich is of course of no consequence, but I often se same over and over again.

I am often delayed in cases. The eggs have to wait ntil the arrival of same, and often I send two or ree post-cards before succeeding in getting empties om London and Birmingham Smithfield markets.

I understand from higglers that they have the same mplaint, and this trouble is increased in the flush ason, which easily explains the Smithfield complaint condition of English eggs.

Both Smithfields must look to themselves, and if e expense of cases is not worth their outlay, what the remedy? I would purchase cases for this busises, but not if they want renewing every month or (Smithfield cases are a disgrace in condition, and ke double time to repair and pack each week). I ve done business with my London store for years, d send up to 600 dozen a week (20 cases, 30 dozen ch), and the original cases now used for many years e nearly as good as new, and the interiors are as w.

Admitted there is negligence with the producer at rtain seasons of the year, but the *cases* are the sole ason if ever any of my eggs become stale. Every g on my farm is cleared within every *few days* cept when there is a delay from Birmingham or ndon Smithfield with cases.

This is my experience of many years, and whoever n arrange matters to remove this complaint will do great deal in improving the reputation of the glish new-laid egg. I *admit*, due to delay of cases, eggs are sometimes stale, but *never* those sent to regular clients, who I may say test every egg, and receive no complaints.

Yours truly,

"5XX."

The End of the Outbreaks of Roup.

By **T. W. TOOVEY.**

THE CONCLUSIONS.

The Editor has, on my behalf, given Mr. Walmsley his answer. I will leave it at that, except to say, I have no reasons to be dissatisfied with the financial results of my poultry operations, and the losses incurred by the late severe epidemic of roup and bird-pox, severe as they have been this year, do not affect the whole very much. It is difficult sometimes to analyse one's own motives, as a whole, for a course of action, but I think the main reason for my making public the course of the outbreak was because I realised what a menace disease is to the future of the industry Something I had not sufficient appreciated before, and especially because I had had the presumption to write a book on "Commercial Poultry Farming," which had been widely read, the third edition is now running out. In this book I thought I had presented the subject in a somewhat rosy light, and that it was up to me now to show the other side of the picture.

I knew also that my own trouble was by no means an isolated one, that outbreaks were for very good reasons often hushed up, and and that it would be a good thing to have one ventilated and discussed. I also wanted to wake up the veterinary department of the Ministry of Agriculture to the importance of their work, an importance which I had good reason to know they did not realise; and to impress upon the National Poultry Parliament the mistake, in my opinion, which had been committed in allocating so small a portion of the funds of National Poultry Institute to research on disease, as has been done. I was not referring to the department of the Poultry Commissioner, whom I have the privilege to claim as a personal friend. and no one knows better than I do, how anxious he is to promote the best interests of the Poultry Industry in every direction. Incidentally I thought perhaps I might derive some advantage from publicity, although I had had the best advice I thought I could get, for my many friends had very kindly sent me from all parts of the country advice of various kinds. For this I again take the opportunity of thanking them sincerely.

However, my articles did bring Mr. Brain to my help, for which I can never sufficiently thank him, as his most comprehensive treatment did stamp out the disease in a most miraculous way in just under a month.

I have been criticised because I did not try vaccination. I did not know much about it at the commencement. Then I got involved in a cure which proved a failure; afterwards I received most conflicting reports, absolutely at issue with each other with the same vaccine. In one I was told it was most effective, both in curing and prevention; in another that it actually inoculated the birds with the disease it was intended to prevent. On the whole the "fors" and "against" were about equal in number.

The vaccination of large numbers of poultry is not a thing to be lightly entered into, especially if they must be done twice, or, as one of my informants said, three times, both the expense and labour involved is considerable; still if these cure no other way, it would of course be far preferable to what we have gone through during the last six months. Still, if Mr. Brain's system of flock treatment, fortnightly or so, acts as the preventive, as he asserts it will, as I think it will, it is far preferable to any scheme of vaccination. Anyway, I have no doubt I shall have full opportunity of putting it to the proof during the coming winter.

As regards the future, I have not yet classed myself among Mr. Walmsley's failures, even in poultry farming, which is after all the main business I am concerned with.

I confess that many years of success had given me too much self-assurance. That has now been corrected by an experience without which a poultryman's education probably is not complete; it is all the same one he cannot afford very often. I am now reconstructing the farm on smaller, but I hope on safer lines. I shall revert to the old plan of resting all the land at intervals; even during occupation the birds will not be kept at more than 250 to the acre.

The floor space will be increased to 4⅜ square feet per bird. All food, both mash and corn, will be fed in the troughs. We commenced this five mouths ago, and I think egg production has been improved rather than otherwise thereby. Certainly it is easier to feed more accurately, and there is no musty corn hidden under the litter. The risk of the spread of disease must be lessened. No other domestic animals, except poultry, have their food mixed with their own excreta. The farm is divided into three complete sections. Each section will be in charge of two men, who will be entirely responsible for the care of their own unit of 1,800 hens. They will have their own breeding pens, their own rearing ground, appliances and rear their own replacements. The facilities for rearing, including the land, will be separate from the section in which the layers are kept, each section will again be sub-divided into the three sections. In one will be the yearling or older hens; in the other the year's pullets will be placed, and the other will be resting from October to April, both land and houses, and will then be ready for the pullets of the year, which will be moved into their permanent houses direct from the chicken houses. If I have made myself clear, it will be seen that one-third of the land occupied with layers will be resting each winter. The chickens' ground, of course, will get, as before, six months' rest yearly. The lay-out will comprise a paddock for the coops—48 to each pair of men; six chicken houses, each 60ft. long—two for each pair of men; with quarter-acre run to each house; six breeding pens—two for each pair of men, each pen containing 50 hens or very early-hatched pullets and five cocks. These are run at only 200 to the acre, and each pen of birds has two grass runs to be used alternately. The rest of the land, including that previously used for growing pullets, is divided into nine paddocks of from 3 to 4 acres each, 3 to each pair of men, in which the houses are on the colony system, containing flocks of 80, 100, and 160 birds. Six poultrymen, one poultryman carpenter, who will also act as a relief man, and one clerk in the egg-room comprise the staff. The old staff consisted of ten, so that labour charges will be increased, but the work should be done better—the result remains to be seen.

The outfit, I should have mentioned, contains a range of houses with accommodation for 1,000 cockerels, which will be moved into these direct from the chicken houses to be fattened off and sold as soon as possible.

THE SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

APPLICANTS FOR MEMBERSHIP.

Longhurst, E. H. S., Rolleston Vicarage, Notts.
Stringer, Miss I., 29, Pembroke Crescent, Hove, Sussex.
Kean, E., Wensleydale Stud Farm, P.O. Box 77, Pietermaritzburg, Natal, S. Africa.
Barnes, Dr. H. A., 19, New Road, Chatham, Kent.
Thomas, E. F., Hazelthorpe, Stalisfield, near Faversham, Kent.
Hamilton, Miss M. F., Pleydells, Rushlake Green, near Heathfield.
Jones, G. Charlton-, Edenfield P.F., Medstead, Hants.
Bailey, Capt. G. D. (M.C.), Ashcroft, Rotherfield, Sussex.
Harvey, R. W., The Beach, Winchelsea, Sussex.
Palmer, C. E., The Bungalow, Buxton Road, Buglawton, Congleton.
Walker, Thomas, Marley Brow, Bingley, Yorks.

KEIGHLEY AND DISTRICT BRANCH OF S.P.B.A.

All members are invited to visit the Poultry Farm of Mrs. Clay, M.B.E., The Riddings, Long Preston, on Saturday, August 15th. 1925. The journey will be made by char-a-banc, fare 4s. 9d., leaving The Mechanics, Denholme, at 1.45 p.m.; Cross Roads, 1.55 p.m.; Cooke Lane, Keighley, 2 p.m. prompt. Mrs. Clay will entertain the members to tea. All those who wish to join the party, please notify the Hon. Secretary, Mrs. Wilson, "Minorca," Denholme, Bradford, not later than Thursday, August 13th.

MIRFIELD AND DISTRICT POULTRY-KEEPERS' ASSOCIATION LAYING TRIALS, 1924-25.

Tenth Monthly Report.

The tenth monthly period of the Test organised by the above closed on 2nd August. The health of the flock is good. There is a considerable decrease in egg production owing to broodiness in the heavy sections; also several of the birds are in moult. Only two birds have laid over 20 eggs during the month.

SUMMARY OF LEADING PENS.

White Leghorn, Pen Section. (Three Birds).—Mr. N. Firth, 378 pts.; Ledgard and Brown, 340; Mr. E. G. Ermen, 335.

A.O.V. Light Pen Section. (Two Birds).—Davey and Sons, 242; Mr H. Poole, 197; Davey and Sons, 172.

White Wyandotte Pen Section. (Three Birds).—Mr. E. G. V. Ermen, 342; Mr. R. Scott, 333; Mr. A. Blackburn, 286

A.O.V. Heavy Pen Section. (Three Birds).—Mr. W. Horsley, 446; Mr. P. Furness, 421; Mr. T. E. Burnett, 331.

White Leghorn. (Single Birds).—Mr. A. Blackburn, 155; Mr. W. Horsley, 155; Ledgard and Brown, 152

A.O.V. Light. (Single Bird).—Sykes Bros., 125; Mr. F. Elmour, 104; Ledgard and Brown, 90.

White Wyandotte. (Single Brd).—Mr H. Crowther, 146; Mr. C. Whiteley, 132; Mr A. Blackburn, 132.

A.O.V. Heavy. (Single Bird).—Mr. E Saxton, 127; Mr. J. E. Burnett, 126; Mr. A. Sykes. 112.

The Harper-Adams' Conference.

If Professor Thompson is not pleased at the success of the Ninth Annual Poultry Conference, held at Harper-Adams' College, it can only be because he is very difficult to please. It was in every way a success. The papers were excellent, the discussions keen, and the interest was maintained throughout.

The Conference is, of course, the great event of the year to which we all look forward. Apart from its value as a Conference, there is great pleasure in renewing old acquaintances and arguing over those problems which many of us hope, but do not always expect, to solve.

There was a large attendance, and while a great number of those present had attended the Conference for several years past, an equally large number had made their first appearance.

The arrangements were in every way excellent, and we have only one little grouse to make, or perhaps it would be wiser to say, a suggestion. It is, that those responsible for the arrangements will, in future years, allow considerably more time to be given for discussions of the papers. With all due deference to those who read the papers, and with the fullest acknowledgment of their excellence, we feel we are only expressing the opinion of the great majority of those present when we say that in one or two cases they might have been a little more concise.

Again, we think it is a mistake to attempt to crowd three papers into a morning or afternoon session. On the Wednesday morning two very interesting and instructive papers were read by Professor Willard C. Thompson and Mr. W. B. Thompson, B.Sc. There were many of us present who wished to take part in the discussion, but were unable to do so on account of the very limited time allowed. Long experience tells us that the vast majority of those who attend a conference or a lecture most thoroughly enjoy, and probably learn, a great deal more from the questions asked, or discussions on the paper, than from the actual paper itself. This in no way reflects upon the lecturer, for no man can, in the course of a short paper, cover the whole of his subject, and very frequently a question may draw from him the information which he himself wished to convey.

The proceedings were opened on the Wednesday afternoon, when Dr. Crowther welcomed those present on behalf of the governors of the college, and gave a short address on "The Growing Significance of the Poultry Industry." Director Willard C. Thompson followed with a paper on "The Programme of the National Poultry Institute," which was listened to with attention and interest.

After tea a visit was paid to the site of the National Poultry Institute Experimental Farm. The party was conducted by Professor Thompson, who explained everything for their benefit. At this stage it would be far too early to make any comment on what is being done, and our readers will find all the information they need at present in Professor Thompson's paper, which we shall publish in an early issue.

Everyone present was greatly looking forward to the address on "The Practical Significance of Sex-linked Inheritance in Poultry Breeding," by Dr. Crew. Dr. Crew's wonderful power in making a difficult and technical subject profoundly interesting is well known to those who have attended previous conferences, and for one and a half hours he held his audience completely, while he lucidly explained his subject, and later on discussed the economic significance of sex-linked inheritance. No wonder there was a very enthusiastic response to the resolution of thanks.

An interesting discussion followed. There seemed to be a diversity of opinion as to the economic value of sex-linked inheritance, and the question was put as to its possible value to the general farmer. Dr. Crew warned those present, and more especially appealed to the leaders and teachers in the industry, to impress upon those engaged in it, the necessity of stopping at the first cross. On this point we propose to offer no observations at present. The matter is one of extreme importance, as our readers are aware they have always looked upon this cross-breeding as a retrograde step, and already we find pedigree breeders are expressing uneasiness as to the effect upon the future of the poultry stock in this country. For the present we leave it at that.

On Thursday morning Mr. H. Howes presided, and a most interesting paper by Professor Willard C. Thompson on "In-shell Mortality—A Cause of Serious Losses Annually," was listened to with close attention. This was followed by a really excellent paper by Mr. W. B. Thompson, B.Sc., on "Methods and Practices of Artificial Incubation which will tend to Increase Efficient Hatches." We repeat, it was a very great mistake that in two such important papers as these discussion should have been limited to such a very short time.

Following this Mr. Jonathan Collinson read a paper on "The Care and Management of Baby Chicks through their First Six Weeks."

After lunch papers were read by Mr. George Atkinson, M.R.C.V.S., on "Coccidiosis—Its Cause, Treatment, and Control"; Capt. Doyle, F.R.C.V.S., on "Recent Developments in the Bacillary White Diarrhoea Investigations"; and Major Saunders, M.R.C.V.S., on "The Causes and Significance of Normal Mortality in the Laying Flock."

There is no doubt as to the interest aroused in

(Continued at Foot of Column Next Page).

In-Shell Mortality—A Cause of Serious Losses Annually.

By **WILLARD C. THOMPSON, B.Sc.,**
Director, National Institute of Poultry Husbandry.

I approach the subject of In-shell Mortality with a full appreciation of the extreme importance of the subject, and also with a realisation of the difficulty of handling it adequately. There is perhaps no one factor in modern poultry keeping which rises as a limiting factor more continuously and more seriously than the percentage of mortality which occurs in eggs during the period of incubation.

As you will undoubtedly expect me to speak at this time primarily from my several years' experience in America and contact with the scientific work done on that side of the water, I shall go chiefly to a few American Poultry Husbandry Investigators who have been attempting a solution of this very question of In-shell Mortality. In my mind, Dr. L. C. Dunn, graduate of Harvard University, working at the Connecticut Experiment Station at Storrs, has given us the best suggestions to date on possible causes of in-shell mortality, or factors that affect hatchability of eggs. It is to his work that I would draw your attention during the majority of this paper. I shall also refer to a worth-while suggestion made by Mr. Sanctuary while engaged at the Massachusetts Agricultural College, and to one from Dr. F R. Beaudette, Poultry Pathologist at the New Jersey Agricultural Experiment Station.

One must recognise first of all that among the several factors that operate to reduce the number of chicks hatched from a given number of eggs set is the factor of infertility. According to Dunn, and I think we can generally agree with him on this point, the usual cause of infertility is a problem in animal behaviour, and is not usually traceable to physiological causes Average strong, well-bred, properly fed, lighted and exercised hens lay potentially fertile eggs. If they are mated with strong healthy vigorous male birds comparatively high fertility should be expected. Severe climatic conditions will sometimes cause at least temporary lowering of fertility, because of the lessened activity of the breeding stock due to such climatic conditions. Dunn believes "that infertility in general is almost certainly not an inherited trait, and shows no correlation with hatchability proper, nor with other commonly measured traits of fowls, such as egg production." It is this point that I would especially emphasise, because from time to time I have had it suggested to me that low fertility was apparently transmitted from one generation to the next. I have had some instances come under my observation in which persistent low fertility was apparently due to some other factor than environmental conditions. One case in particular, that of a White Orpington flock in New Jersey, was called to the attention of Dr. Beaudette and myself, because the owner had been unable to secure more than a very low fertility during two or three successive seasons. This occurred in spite of a general care and management, which any of us would be quite willing to describe as as near perfection as we might know how to dictate. During the spring of 1924 several experiments in the feeding of Cod Liver Oil and other vitamin-bearing materials were carried out on that flock with encouraging, but not wholly satisfactory results. During the present spring I am informed by my former colleague, Dr. Beaudette, that further experiments on that same flock are being tried, this time using certain preparations of glandular extracts. A recent letter written at the close of the hatching season points to rather phenomenally satisfactory results. I mention this in this place to indicate that even if we pass over the factor of low fertility as being a not too serious one in determining final costs of chicks, we must not leave it entirely without thought. Is it not possible that in our experimentation we may accidentally, or otherwise, stumble across some information which will help us to keep the percentage of infertility low, and at the same time assist in raising the percentage of hatchability.

The incubator and its management is no doubt a factor that has a real and important bearing upon the percentage of hatchability, but under what we usually call good incubation management, we are apt to find a deplorably low percentage of hatchability among the fertile eggs remaining in the incubator. Pearl, Lamson, Card, Dunn, and others, have stated that all eggs are not equally hatchable, because they are produced by mothers which are unequal in their ability to produce hatchable eggs. Abundant evidence has been gathered both on private poultry farms and at

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THE HARPER-ADAMS' CONFERENCE.

(Continued.)

all questions connected with disease at the present moment. Both Capt. Doyle's and Mr. Atkinson's papers will be published in these columns.

It was not to be expected that they would be in a position just now to give us much further information, but when investigations have been carried further, we may hope that in time they may be able to do so.

All three papers were, however, of great value, and Major Saunders greatly pleased his audience with the manner in which he dealt with his subject.

On Thursday evening an informal discussion took place on Roup and many other subjects. Unfortunately we were unable to stay for the Friday. Professor W. Thompson's article on "Practical Ration Making—Principles and Practices," however, will appear in our next week's issue, and we hope to be able to give a full report of all the other papers.

We would only like, in conclusion, to heartily congratulate Professor Thompson and Dr. Crowther on the success of the Conference, and to express great appreciation of the kindness and consideration which made it so enjoyable to all those who were happy enough to take part in it.

experiment stations where trap-nesting and pedigree hatching has been practised to the effect that a hen may be described as either a good or poor hatcher, perhaps just as accurately as she may be described as either a good or poor layer, and, moreover, that hatchability, like egg production, is a constant character of that hen, persisting through her several mating seasons. This would indicate that probably hatchability is inherited. Hays and Sanborn, at Massachussetts, have given it as their opinion that high hatching quality is inherited in a simple manner as a single Mendelian unit. That statement was recently made, and, so far as I know, a full report containing proof is not yet available to the public. The statement, however, is truly an important one. Some investigators will differ materially with Hays and Sanborn. Mr. Dunn, I believe, is one of those who is inclined to the belief that high hatchability, while it may be inherited true enough, is quite complex in its inheritance rather than simple. If we examine experimental work on this subject we will find that several statements would appear to be true.

(1) Individual hens differ considerably in hatching quality, ranging from as low as 10 per cent. to the high efficiency of 100 per cent. In my own experience with the hatching of pedigree eggs this has appeared again and again to be true.

(2) Hatching quality is inherited. Many reports have mentioned study of hatchability of eggs produced by daughters as compared with the hatchability of eggs produced by the mothers. In several instances, at least, a small correlation between the two would give us some grounds for feeling that if we selected breeders whose mothers upheld a reputation for high hatchability, we would eventually secure an increased rate of hatchability on the average.

(3) Insufficient evidence has been presented to prove that it is possible to establish families or strains of fowls for which it may be claimed that a high rate of hatchability is a distinct and marked characteristic; in other words, it is necessary to prove that high hatchability, or for that matter, low hatchability, breeds true, generation after generation. The possibility, however, contained in this suggestion is one of great significance and importance.

(4) Dunn, as well as Cole and Halpin, in independent experiments, feels that it is safe to accept the fact that close in-breeding usually results in a progressive decrease in the hatching quality of eggs. Dunn reports that in his experiments "the hatchability of eggs fell from an average of about 75 per cent. before in-breeding to a little more than 20 per cent. after three generations after brother-sister matings." The reverse is usually true, that out-crossing or outbreeding, which means matings between unrelated parents, often show an increase in hatching quality.

Dunn has asked and answered four questions which I feel sure will interest you, and add something to our knowledge on this subject.

(1) Are differences in hatching quality between hens due to differences in the environment—that is, feeding, housing, etc., of the mothers? In arriving at an answer to that question data was gathered as to differences in hatching quality among hens which were under identical managerial conditions, and then again, when such hens were placed under varying conditions. In general it was found that differences in the hatchability persisted, even though environmental conditions changed. In other words there was evidence to support the feeling that certain hens might always produce a higher percentage of hatchability in their eggs than others, in spite of varying environmental conditions; however it was found that two environmental factors, at least, did often affect hatchability. In the first instance, the eggs of fowls on free range hatch better than those of fowls closely confined to houses, and, therefore, placed under more intensively artificial surroundings. I venture to suggest that this experience has been multiplied hundreds of times by practical poultry breeders, and that we can all agree that it is probably true. In the second instance it was found that the addition of green food to the ration given to breeding stock resulted in better hatchability. Wisconsin, Kansas, New Jersey, and other poultry experimental departments, have suggested that the vitamin content (probably the fat soluble A.) of the green food might explain much. Hughes, of Kansas, has also pointed out that subjection of breeders to direct sunlight has a similarly beneficial effect on hatchability. It must be observed, however, that when all the hens in a flock are subjected to these better conditions of environment and the beneficial effect of free range, green food, and sunlight, are produced on all hens, the hens originally called high hatchers might become, under such conditions of environment even better hatchers, while the poor hatchers might be considerably improved. In other words, while we may be able to increase hatchability by allowing our breeders free range, green food, and sunlight, we cannot do away with the probability that there is a huge difference between the hens in our breeding pens as to hatching quality.

(2) Are differences in hatching quality due to differences in the constitutional vigour of the mothers? It has been repeated again and again that if poultrymen would only give due attention to the selection of their breeding stock for robust vigorous constitution, that they would thereby select hens which would produce higher hatchability of eggs and chicks. It is important that breeding stock should be vigorous and strong, and it is probably true that if the breeding stock is notably weak that the chicks will have a difficulty in finding their way out of the shells, but it remains that when careful record is kept of hens, all of which might reasonably pass the ordinary examination for health and vigour, very noticeable differences are to be found, as there will be high hatchers and low hatchers in the group. I think it is safe to say that we must automatically and regularly select our breeding stock for health and vigour, but we must not feel that by so doing we are ensuring a high percentage of hatchability.

(3) Are the differences due to differences in egg production of the mothers? This question raises an important point upon which many poultrymen have offered discussion in the past. It is frequently held that high record hens usually will not produce a high percentage of hatchability when their eggs are used

in subsequent breeding seasons. Dunn, whose research into this question has been perhaps more complete than any other yet, states that he has found no correlation between egg production and hatchability. This would indicate that when the eggs of high-producing hens fail to hatch, it has been a matter of coincidence rather than cause and effect. In my own observations at the New Jersey Experiment Station I found essentially the same results, and, therefore, can agree with Dr. Dunn in this particular. The full and complete answer to this question is important. If it is true that we cannot expect even a reasonably good hatchability from our high egg record hens, is it not possible then that we must hold back in our efforts to run the average egg production per hen per year to any of the high figures which we have been having in mind in recent years? If, on the other hand, we find it to be true that there is no correlation between egg production and hatchability, does it not give encouragement to the poultry breeder to continue in his efforts to secure a high average egg production per year per hen, providing he maintains the bodily strength and vigour of the hens?

(4) Are the differences caused by differences in the kinds of eggs laid by the high and low hatch mothers. One might spend considerable time in answering this question, because the data at hand is conflicting in points. I think we may sum up the situation by saying that the average size of egg and the average shape of egg makes it possible for the developed embryonic chicks to make their way out of the shell at the close of the incubation period, but that abnormal size or shape would tend to make the process of leaving the shell more difficult. The same thing might be said of the shell texture; that is, normal shell texture is required for best hatching results.

At this point I would call attention to the suggestions of Sanctuary, who during the successive seasons, 1922, 1923, and 1924, made a careful and detailed examination of the chicks which failed to hatch, and which apparently died some time after the 18th day of development in the shell. In all, something like 1,500 such unhatched chicks were examined. It is interesting and important to know that in that examination a rather large percentage of chicks were found in abnormal position. Of 73 embryos examined in 1922, 72 per cent. were abnormal in position, so that it was entirely impossible for the fully-developed chick to get out of the shell. In 1923, out of 1,163 unhatched chicks, 52 per cent. were found to be abnormal, and during the spring of 1924 46 per cent. of the 254 chicks examined were abnormal in position within the egg. Three major malpositions were noted, the most frequent one being that of the head extended toward the rear down the ventral side of the body, and between the thighs. It should be noted here that the normal position of the fully-developed chick within the shell is with the head bent to the right, the beak at a point near the end of the air cell line in the large end of the egg, with the feet nearly opposite it. The malposition,of second importance in occurrence, was a completely reverse position of a chick with its head in the small end of the egg. In the third malposition the head was turned to the left instead of the right, otherwise normal. A further important observation made by Sanctuary was to the effect that in the study of unhatched chicks from the pedigree eggs of a strain of Rhode Island Reds which had been selected each year for high hatchability tendency gave some indication that the percentage of abnormal embryos was slowly, though continually, reduced by that selection process. He further suggests that while it is possible that the position of the embryo within the shell may be influenced by the manipulation or the handling of the eggs during the period of incubation, all his observations thus far have been negative.

(*To be Continued*).

ANSWERS TO QUERIES—Continued.

F. W. (Rhonda) writes that he has some Barnevelders, hatched April, 1924; they did not come on very well, and about two months ago he killed two off because they were going light, and seemed to be half dead. Now he has two more going the same way, and he would be glad if I would tell him what to do. If these birds are going light it may be due to one or two causes, and as my correspondent says they did not come on very well there may have been inherited trouble, or it may have been due to his methods of rearing. There is just the possibility of their being tubercular. Under the circumstances, I should endeavour to put them on to fresh ground, keep them in well-ventilated houses, perfectly clean, giving good nourishing food, and it would be advisable to add two teaspoonfuls of cod liver oil to every pound of the mash. This treatment may be effective, but the wisdom of attempting to treat such birds I very much doubt. If "F.W." would write to me and send me more particulars as to how he is keeping his birds, size, etc., of his runs, I might be able to help him more effectively.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year begins on 1st September.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, AUGUST 7th, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in noderate supply and meets a quiet trade at late rates, except t London, where prices have declined from 12s. 6d. to 12s. 3d. er cwt., while imported has a dearer tendency, No. 1 Manitoba nd Argentine now averaging 14s. 7d. and 13s. 9d. per cwt. espectively. Fair supplies of English feeding barley at London re in rather better request at higher prices, but elsewhere rade is quiet at recent rates. Imported feeding barley is in teady request, and with only small supplies available is slightly earer at Bristol and London. Home-grown oats are scarce and nchanged in price, and imported mostly make recent values. ome new winter oats are on offer and at Bristol sell at about s. 8d. per cwt. Moderate supplies of maize are in fair request, nd quotations have again advanced, the average quotation for rgentine being 10s. 11d. per cwt., an increase of 2d. on the eek.

Bran is in moderate request, but at Liverpool, owing to arcity, quotations have advanced from £7 to £7 5s. per ton. oarse middlings are in demand and are 5s. per ton dearer at ristol and Hull, the average quotation being £8 13s. per ton. eals are firm and maize meal has again advanced, and at an verage of £11 17s. per ton is 13s. dearer than a month ago. ilcakes generally are in quiet request at unchanged prices.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull, 6 17s; Liverpool, £7 5s; London, £7 2s. Broad Bran: Bristol, 9 5s; Hull, £7 17s; London, £8 15s. Middlings—Fine (Imported): ondon, £9 17s: Coarse (British): Bristol, £9 5s; Hull, £8 15s; iverpool, £8 5s; London, £8 7s. Pollards (Imported): Bristol, 7 17s: Hull, £7 5s; Liverpool, £7 7s: London, £7 10s. Rice Bran: ristol, £7 17s: Liverpool, £7 7s. MEAL.—Barley Meal: Bristol, 12; Hull, £11 13s; London, £12 5s. Maize Meal: Bristol, £12 7s; ull, £11 8s; Liverpool, £11 17s; London, £11 15s. Maize Meal African): Bristol, £11; Hull, £9 10s; London, £10. Maize Germ eal: Bristol, £11; Hull, £10 5s; London, £9 15s. Maize Gluten eed: Bristol, £11 10s; London, £10. Locust Bean Meal: Bristol, 15s: Hull, £9 10s; Liverpool, £9 10s: London, £9 15s. Bean eal: Bristol, £13 15s; Hull, £11 18s; London, £13. Fish Meal: istol, £20 10s; Hull, £20; Liverpool, £19 10s; London, £20 10s.

EGGS AND DEAD POULTRY.

Eggs meet with more inquiry on the whole and rather gher prices are quoted for most descriptions. A moderate quiry for dead poultry at London has led to firmer rates, t little change is reported at other centres.

Week-end prices—Eggs (per 120): British, 17s 6d, 14s 3d; Irish, 3d, 14s 9d; Danish, 16s 0d, 15s 6d; Dutch, 16s 9d, 15s 9d; ench, 14s 9d, 14s 0d; Belgian, 15s 6d, 14s 6d; Italian, 14s 6d, 6d; Lithuanian, 13s 6d, 12s 6d; Chinese, 12s 3d, 10s 9d; ssian, 12s 3d, 11s 6d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 9d, 1s 5d; Irish, 5d, 1s 3d; Others, 1s 8d, 1s 3d. Ducks, 1s 4d, 1s 0d.

EGGS.

Per Doz.—Ashford: First, 2s 5d; Second, 2s 3d, Birmingham: rst, 1s 7½d; Second, 1s 6d. Bridgwater: First, 2s 3d; Second, 10d. Chelmsford: First, 2s 1½d; Second, 1s 11½d. Colchester: rst, 2s 0d: Second, 1s 9d. Doncaster: First, 2s 0d; Second, 10d. Dorchester: First, 2s 4d; Second, 2s 2d. Exeter: First, 10d. Hereford: First, 1s 7d. King's Lynn: First, 1s 7d; ond, 1s 5d. Llandilo: First, 1s 7d; Second, 1s 6d. Mold: First, 10d; Second, 1s 9d. Newport (Mon.): First, 1s 9d; Second, 8d. Norwich: First, 1s 8d; Second, 1s 6d. Oswestry: First, 10d. Penzance: First, 1s 9d; Second, 1s 8d. Saffron Walden: st, 2s 0½d; Second, 1s 9½d. St. Ives (Hunts): First, 1s 8½d; ond, 1s 7½d. Salisbury: First. 1s 9½d; Second, 1s 9d. Skipton: st, 1s 9d. Truro: First, 1s 9d; Second, 1s 8d. Welshpool: st, 1s 10d; Second, 1s 7d. *Carlisle: First, 1s 11d. *Derby: st, 1s 10d. *Ipswich: First, 2s 0d; Second, 1s 6d. *Lincoln: st, 1s 10d. *Shrewsbury: First, 2s 0d; Second, 1s 11d. *York: st, 1s 10d: Second, 1s 9d.

FOWLS.

Per lb.—Birmingham: First, 1s 4d; Second, 8d. Doncaster: st, †4s 6d; Second, †4s 0d. Exeter: First, 1s 4d. Hereford: st, 1s 6d. Llandilo: First, 1s 9d: Second, 1s 7d. Newport n.): First. 1s 9d: Second. 1s 4d. Truro: First, 1s 5d. Welsh- l, First. 1s 6d: Second, 1s 4d. *Derby: First, †5s 0d; Second, 0d. *Ipswich: First. 1s 8d: Second, 1s 6d. *Lincoln: First, 0d; Second, 3s 6d. *York: First, †4s 9d; Second, 4s 0d.

DUCKS

Per lb.—Birmingham: First, 1s 4d; Second, 1s 2d. Doncaster: st, †4s 6d: Second, †4s 0d. Exeter: First, 1s 3d. Hereford: st, 1s 3d. Llandilo: First, 1s 8d; Second, 1s 6d. Truro: First, 4d. Welshpool: First, 1s 4d: Second, 1s 2d. *Derby: First, 0d; Second, †4s 0d. *Ipswich: First, 1s 5d.

* At these markets the prices quoted are for sales by pro- ers direct to consumers. At other markets prices are those l to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, August 12th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to the poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

Classified Advertisements.

(PREPAID RATES).

1d. per word—minimum charge, 1s 0d. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS,	per line, extra		9d.
DAY-OLD CHICKS,	,,	,,	1s.
DAY-OLD CHICKS	,,	,,	1/6

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9d. size allows for Thirty-one to one line.
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When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

N.B.—Advertisements, unless accompanied by correct amount, will not be inserted.

Advertisements must be distinctly marked with the Heading under which they are to appear.

Advertisements must be written on a separate sheet of paper, and one side of the paper only.

Name and Address to be counted. In the case of a Box Number being used, the words, "Box," "Eggs," 94, Farncombe Street, London, S.E.16, to be counted as eight words, i.e., making a total extra charge of 1s. 8d. (1s. for Box; 8d. for address) per insertion.

Advertisements must reach this office
FIRST POST FRIDAYS
for insertion in the following Wednesday's issue. Those received after this time will be inserted in the next issue.

Displayed Advertisements.

Ordinary Page, £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 6d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Positions by arrangement. Discounts for Series. Full Scale of Advertising Rates on application.

Advertisements, addressed to Mr. S. H. BURLES, "EGGS," 94, FARNCOMBE STREET, LONDON, S.E.16, **MUST REACH US BY FIRST POST FRIDAY MORNINGS,** for insertion in following issue. Those received later will be inserted in the next issue.

A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to The Beeches, Rudgwick, Sussex.

FORTHCOMING EVENT

CLITHEROE AND DISTRICT UTILITY AND FANCIERS' POULTRY SOCIETY.

SIX MONTHS' SINGLE BIRD LAYING TEST, in Three Sections—Light, Heavy and Cross—to be held at HENTHORN POULTRY FARM, CLITHEROE, under the Supervision of Mr. A. W. WOODFORD.

OVER £50 IN PRIZES, FOUR CHALLENGE CUPS, and MEDALS.

TEST COMMENCES OCTOBER 10th
ENTRIES CLOSE SEPTEMBER 12th.

Entries 5s. per bird. Bird returned to Owner at end of Test.

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EGGS.

FOR SALE.

Guinea Fowl Eggs for sitting, 8s. 6d. per dozen.—John Taylor, The Fields, Stapleford, near Nottingham.

ALEX. J. BELL, M.S.P.B.A., U.D.C., Longwick P.F., Princes Risborough, Bucks. R.I. Reds, Eggs, Chicks, and Stock Birds. List free. Satisfaction insisted on. (See under Ducks and Drakes also).

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FOR SALE.

Guinea Fowl Chicks, from 1-6 weeks old, from 1s. each; also Eggs, 5s. dozen.—Bowden (see Angoras).

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Great Fransham Poultry Farm, Dereham, Norfolk. First Cross Pullets available; three months old, 5s. 6d.; four months old, 7s. each; carriage paid; cash with order. Money gladly refunded if not amply satisfied.

R.I.R. Pullets, February hatched, Arthur Snowden's.—Apply, R. Channon, Farway, Colyton, Devon

1925 PURE-BRED PULLETS.

Four, Five, and Six Months old; 10s. 6d., 12s. 6d., and 15s. each.

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Splendid layers of large eggs.

WHITE WYANDOTTES.

Full details on application. Carriage paid On approval

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EAST BUDLEIGH,
DEVON.

Ful-O-Pep Laying Mash
and
Ful-O-Pep Growing Mash
are renowned the world over for producing profitable poultry.

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TRADE **-O-** MARK
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NO MIXING: NO HEATING WATER: NO TROUBLE

Write for the revised edition of the Ful-O-Pep Handy Monthly Guide—the most valuable book on Incubation, Rearing and Poultry Husbandry. This book has detailed suggestions for every month in the year. Also 12 monthly egg charts for you to record your eggs. Sent free and postage paid.

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FOR SALE.

1925 Hatched R.I.R. Pullets, Own
ley-Boucher; February, March and
April; all from trap-nested dams;
tul, well-developed birds. Price 1
21s. each. Ten years' continuous
nesting.—Mrs. Worsam, Pyrcroft
Chertsey.

Ten Leghorn R.I.R. Pullets, March
hatched; 5s. 6d. each; carriage paid
proval.—Wm. Howard, Fransham,
ham, Norfolk.

1925 Crop of Pullets and Cockere
sale; all varieties; also imported
can Mammoth Bronze Turkeys.—P
lars from Mill Poultry Farm, Hale

Light Sussex Pullets; January,
ruary, March hatched; Rothschild
Cook's strain; 10s. 6d., 8s. 6d.; ca
paid.—Cornes, Woodnesboro, San
Kent.

Twelve White Wyandotte and 40
Leghorns, all hatched April, 1925;
trap-nested stock, with high re
price 10s. each. Appro. with depos
Carlton, Horncastle, Lincs.

Three Boucher direct Pullets;
direct from Boucher's 312-egg hen,
£3 5s.—Miss Robertson, Withington
tory, Glos.

Eighty R.I.R. Pullets, January, Feb
March hatched; sire direct from Bou
312-egg hen; 10s. 6d each, Six R.I.R
lets, 1924, 7s. 6d. each.—Miss Rob
Withington Rectory, Glos.

1925 PULLETS, ALL FROM 2oz.
Utility White Leghorn Pullets,
nested stock; only 2oz. eggs incu
from 10s. 6d. each. Individually ped
from hens who laid over 200 2oz. eg
their pullet year; 35s.—Champions
Beaminster, Dorset.

Four Splendid Barnevelder
(Walker-Middelman); 5 months; lay
50s. Breeding Pen, 10 Hens, Cock;
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Idenden, Baughurst, Basingstoke.

Pullets and Cockerels. Light
Rhode I. Reds. White Wyandottes
Black Australorps, from 7s. 6d. each
Munday, Mersham, Kent.

Genuine Breeding Stock, brothers
Rhode I. Reds Pullets leading Lanc
Laying Test; £1 each. Sisters, 10s
Leghorns, 1924; pullet records ove
sire's dam 278; 6s. 1925 Pullets, 15
for laying tests. Cockerel, 10s. Ful
gree given. Approval. Carriage p
Lumb, Fairfield, Hebden Bridge.

1925 R.I.R. Pullets, from trap-neste
gree stock; 7s. 6d., 10s. 6d., 15s. Also
Sussex and Salmon Faverolles. — Si
M.S.P.B.A., Heathfield, Sussex.

1925 MAY HATCHED
White Leghorn Pullets; 100
healthy birds; bred from two-year
son strain hens and Ransford p
cocks; 5s. each.—Hadwen, Silvers
Yateley, Hants.

PEDIGREE PULLETS.
White Wyandottes and White Leg
Bred from trap-nested L2 tested p
SIX MONTHS OLD.
(NEAR LAYING).
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paid.—Bennet & Pike, Poultry
Ashey, I.W.

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Seventy eight-week-old Pullets, B
strain, from trap-nested stock; 5s
Genuine reason for selling.—Pain, C
View, Lympne, Kent.

EG

Wednesday, August 19th, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

istered at the G.P.O. as a Newspaper.
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Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months " " 6/4
Three Months " " 3/3

A SPLENDID 12 ft.-POULTRY HOUSE

CONSISTING OF A 6ft. —HOUSE AND 6 ft.—SCRATCHING SHED.
Both raised 1ft. from the ground. This is a wonderfully attractive and strongly-built House, with good Scratching Shed Accommodation. THIS USEFUL HOUSE —

Made the "HEBDITCH" Way—

is constructed of ⅝in. V-jointed, tongued and grooved Best Red Deal Boards. It has a partition between the house and scratching shed, and is provided with nest-boxes, two strong and well-hinged doors, press lock and key, two sliding shutters, hen ladder, two strong perches, and four handles for lifting. Size 12ft. long, 4ft high from floor, 4ft. wide.

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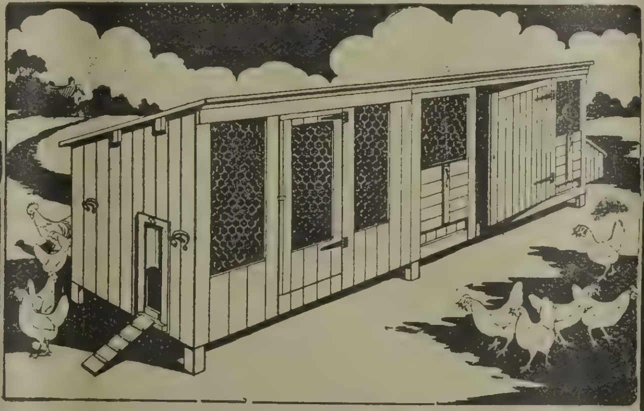

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Quick despatch.
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You want the very best—and cheapest, of course—everybody does—it's a sound business principle and—if you go to Hebditchs'—a very practical proposition, for Hebditchs' big output enables them to give you the King of Value—the big value which you will find it difficult to get elsewhere.

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No. 2	6ft.	4ft.	6ft. 6in.
No. 3	7ft. 6in.	5ft.	7ft.
No. 4	9ft.	6ft.	7ft. 5in.

Price—No. 1 is £6 14 0 No. 2 is £7 4 0
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Wyandottes + I.O.W + Leghorns

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LAYING PULLETS
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The day has passed when breeding stock was chosen on the strength of high records alone. High fecundity without stamina can only make for retrogression.

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3. Is the price one which allows of a reasonable profit?

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We now offer 1924 hens, three months old pullets, and individually recorded cockerels in our five varieties:— W.L., W.W., R.I.R., B.L., & L.S.

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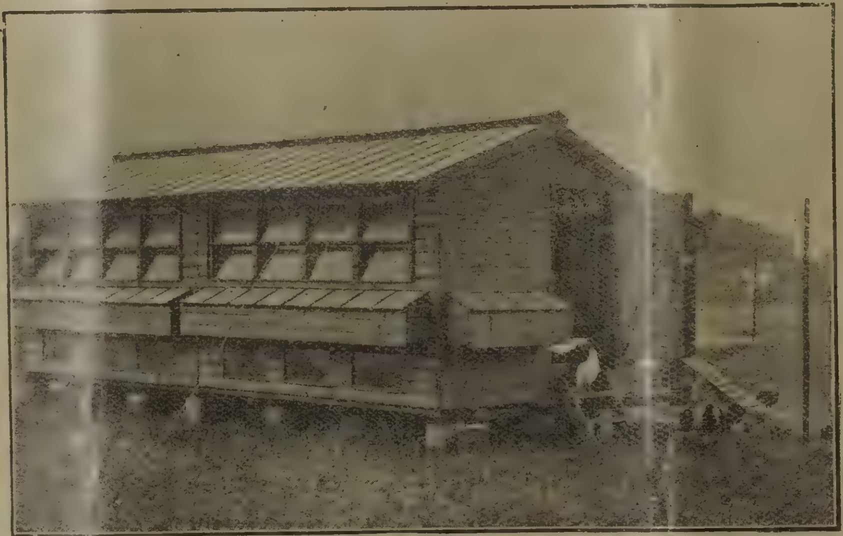

A No. 7 (Two Section) supplied to Capt. Nicholson, Tuthill, Therfield, Royston, Herts.

The result of many years' experiments and now the only type of house in use, for all purposes, upon our own farm.

At our NEW ADDRESS we have greatly increased our facilities for dealing with our rapidly increasing business.

WRITE FOR OUR CATALOGUE.

HERBERT W. MARTIN, Perivale Poultry Farm and Appliance Works,
EAST HARLING, ATTLEBOROUGH, NORFOLK.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association
WEDNESDAY, AUGUST 19th, 1925.

Editorial.

THE WELLINGHAM EXPERIMENTS.

We have received the following report of the S.P.B.A. Intensive Experiments. This is for the month ending 31st July, 1925:—

> "The pullets in this experiment completed their sixth month on July 31st. They laid 1,731 eggs during the month—74 being over two ounces, 309 being just under two ounces, and the remainder being first eggs.
>
> The pullets which had been in lay since May suffered noticeably from the heat wave early in July, and the paleness which was apparent at the end of June became very marked; one of these early maturing birds died from broken yolk sac. The birds which matured at the fifth month only, stood the heat well, and no change in their colour was noticed, also, while one or two of the early-matured birds lost weight, the others continued to put on weight. Two obviously small, backward birds were culled from the flock, and two others with colds were removed for isolation.
>
> The roof of the house was whitewashed, and boughs of evergreens were tied on as a thatch to protect the birds from the heat.
>
> The birds are now divided into two groups:—Group A., which consists principally of the first layers, receives a trough feed of kibbled maize, ad. lib., an hour before dusk; Group B. has maize fed in the litter for the last grain feed as before. Each group has the same dry mash as before, also a liberal green feed daily."

We think our readers will agree that the report is ndoubtedly satisfactory, and demonstrates the pos-bility of successfully rearing chicks on the intensive ystem to the productive stage. The value of the experiment, however, will be rather what it has taught us han the mere fact that it has been so far successful. he reference made to the effect of the great heat upon he birds, by Miss Malcolm, points to the necessity our evolving a type of house which will prevent the rds suffering from either heat waves or extremes of old.

We may remind our readers that the house has been constructed that the whole of the windows were movable. and there was a free circulation of air, and et in spite of this the effect of the heat was severely lt; so much so that it was found advisable to whitewash the roof and protect it with branches of evergreens. Under these circumstances, if the Council of the S.P.B.A. decide to repeat the experiment next season, it will be necessary to give such attention to the roof as will keep the house at a temperature that the birds will not suffer. This could be easily managed at a very small expense.

Comment was made, when the previous report was published, by some of our readers, on the fact that a certain number of pullets had started to lay at such an early age, and this was attributed to their being kept intensively. While this has possibly influenced them to some small extent, we should look rather to the date of hatching, and to the pullets being bred from naturally highly fecund stock than to their being actually kept intensively.

It is pleasing to note that, in spite of this early production, the average weight of the birds is exceedingly good, a fair number weighing 4lbs. and over, and very few being under 3½lbs. in weight, which is excellent for White Leghorn pullets which have only just completed their sixth month.

The 133 pullets laid, as will be seen, 1,731 eggs during the month of July, valued at £8 1s. 7d. During August we may reasonably expect a far greater increase both in numbers and value.

It will be noted that the Council of the S.P.B.A. have accepted our suggestion that half of the layers should be trough-fed with grain from now onwards, in order to see if it is possible to avoid the partial moult by this means.

We have every reason to be pleased with the result of the experiment to date, but we have still much to learn from it, and the chief question which we have to ask ourselves, is, whether, by rearing chicks intensively for the first six or eight weeks of their lives, we can avoid the very high mortality which at present is causing breeders such great anxiety.

Needless to say, we do not suggest for one moment that the mere fact of rearing them intensively will achieve this desirable end. We must use our common sense, and learn from experience how to improve our methods, so that this very heavy mortality can be greatly reduced.

Mr. Collinson stated, at the Harper-Adams' Conference, that the average mortality he believed to be about 25 per cent. We have heard it stated that it is higher than this. At any rate it is sufficiently high to warrant our continuing the experiment on the lines which we are now doing at Wellingham, for there is some possibility that we may at least check the severe losses now incurred from Coccidiosis, if we can rear chicks for the first few weeks of their lives on the Intensive system.

(Continued at Foot of Column Next Page).

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

THE HIGH RECORD CRAZE.

I have received a copy of the "New Zealand Poultry Journal," which contains some more interesting comments upon the statement contained in the article by Mr. C. A. House in "Poultry World," which I ventured to criticise in these columns some weeks back.

Mr. J. B. Merrett, the Editor, forwarded copies of the article written by Mr. C. A. House to several of the big breeders, and their comments upon it are certainly vigorous, if not always to the point.

As one expects in any controversy of this kind, the old, old question is asked, "Must not a record layer possess great stamina to produce such large numbers of eggs?" This would appear to be a very logical question, but is it so, and is it in accordance with fact?

Personally, I am strongly of opinion that it does not necessitate the possession of perfect stamina to produce a large number of eggs. Equally so, a high record hen is not necessarily a breeder of weakly progeny, but I shall return to that point later, as it was indirectly raised in Professor Thompson's paper on "In-shell Mortality," read at the Harper-Adams' Conference.

PILE DUCKWING AND CUCKOO LEGHORN CLUB.

I have been asked by Mr. R. G. P. Nelson, hon. secretary of the above club, to notify breeders that Mr. E. Stevens, the Educational Sub-Office, Aylesbury, is arranging a section for these varieties at the next Bucks Laying Trials, if sufficient support is forthcoming.

The entrance fee will be 15s. per pen of three birds, to be returned with prize-money.

Further particulars may be obtained from Mr. Stevens.

Here is an opportunity for breeders of these varieties to test them in competition with others which are more popular.

TABLE POULTRY.

At this season of the year I get many requests from our readers to recommend them a reliable poultry farm, from which they could obtain sittings of eggs for incubating for table purposes, and I may say I have the greatest difficulty in telling them where these can be obtained, as it is the usual practice to break up the breeding pens at the end of the season and not remate them. It is a little astonishing to me, as I have mentioned previously, that some of our members do not attempt to cater for this business, as if developed on the right lines it might prove very remunerative.

If any of our members have eggs for incubation for sale of table breeds, I should be glad if they would communicate with me. Any variety of Sussex, or crosses with the Sussex, such as Faverolles, Houdans, etc., would be most suitable.

I am surprised that Houdan cockerels are not more frequently used for these table crosses, as they are very virile and produce most magnificent fowls.

THE FOOD PURCHASE SCHEME.

Greater interest is being taken in our Food Purchase Scheme, and general satisfaction is expressed by those who have made use of it.

The following testimonial, one of many, was received this week :—

"Dear Sir,—Re the Growing Mash. I am highly pleased with the mash, and may say that my pullets are doing fine with it. They never seem to have had enough of it, and I should be pleased if you would forward me another 6 cwts. on at once and I think this lot will finish me for this mash, and after this I intend to give the laying mixture a trial."

Yours faithfully, ALBERT HALLOWS.

Of one thing we are perfectly sure, that no foods of equal quality have been placed on the market at such a low price since the war. We claim that the quality of the ingredients used in these mashes is equal to that of any of the highest priced foods now on the market. Although a large number of members have taken advantage of the scheme I must say, in view of the fact that so many urged the Council to make an effort to provide foodstuffs at a lower price, the response has not been all that we expected it to be.

The price of the mashes this present week is as follows:—**Layers' 11s. 6d., Growers' 11s. 6d. Breeders' 12s., all F.O.R. in lots of not less than 5 cwt. of any one kind; bags free.** There are slight fluctuations in these prices in different parts of the country, and the goods will be sent to members from the agent nearest to them in order to avoid high railway charges. It must be distinctly understood that there may be slight fluctuations from week to week in the present prices. A postcard sent to these offices will bring prices fo the current week by return of post.

The following are extracts from two letter received this morning:—

"Thank you for price list received. I find it a great help Corn merchants have brought their prices down as much a 3s. per cwt." A. C. (Bognor).

"I have about 1,300 pullets this year, and have never know them do so well as on these foods." H. W. (Rutland).

EDITORIAL.—Continued.

Developments will be awaited with interest.

In answer to the many enquiries, we can say tha the birds have been fed entirely on dry mash from th first.

With regard to the feeding experiment with the Ligh Sussex, fuller details of this will be published at a late date.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

“BODIES” for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

eplies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

LL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

“Bantam” (Rhode Heath) set a hen with teen Bantam eggs for a friend. Twelve chicks ere hatched. He kept and fed the chicks for five ays, and then lent the hen for a further four eeks. What would be a fair charge for the loan the hen, covering the whole period?—I think if Bantam” charged five shillings that would be uite a fair price, especially as he had the care of e hen for the first four weeks. However, these ings are so much a matter of the nature of the greement, and there is no recognised charge, but is appears to me to be quite fair.

J. K. (Loughton) sends samples of Sussex ound oats at 16s. cwt., bran, 10s., middlings s., maize meal 15s. With regard to the quality d prices: These are quite satisfactory in all ses, but I think the middlings contains a little cess of bran, and the maize meal is 1s. per cwt. o dear; otherwise my correspondent's samples e satisfactory.

“Beginner” (Southall) wants to know of a good me-made laying meal, the quantity to be given, d also grain for a dozen hens. It would have en better had “Beginner” told me the conions under which he was keeping his stock. The lowing is a good dry mash to be always before birds:—4 lbs. middlings, 2 bran, one maize al, one S.G.O., and one meat and bone meal. winter, if he is short of green food, one part of alfalfa meal should replace one part of the n. If he wishes to use a wet mash, it would be advisable to reduce the bran by one pound, and he could economise by using potatoes in place of the ground oats, or even the outside cabbage leaves in place of the bran. Of course, the cabbage and potatoes should be well cooked and the water in which they are cooked utilised for mixing up the mash. As a grain feed, under his conditions, which I suspect to be intensive, equal parts kibbled maize and wheat would be the best. As to quantity he should allow two and a half ounces of the mash weighed when dry, and two ounces of grain, but he must not take this as a hard and fast rule, but learn from observation the actual requirements of the birds. If the mash is not readily consumed, or the grain is not cleanly picked up, he would be well advised to reduce the quantity until he is able to ascertain exactly what is required.

“Beginner” (Saxmundham) sends samples of meat and bone meal at 22s. cwt. The qualtiy is fair. The percentage of bone is rather high, and, in my opinion, it is 4s. cwt. too high in price. The alfalfa meal at 16s. cwt. is an excellent sample, and good value for the money. The soya bean is soya bean cake meal, and not soya bean meal. It would not have the same value, and I do not consider it a good sample. The maize meal at 13s. cwt. is fair average quality, and good value for the money. The barley meal is a little husky, but about average quality. The Sussex ground oats are a good sample, and at 17s. cwt. fair value. The middlings at 10s. 6d. are only moderate, the percentage of bran being too high. The sample of bran at 9s. is good value and good quality. “Beginner” comments on the fact that the mash given in the Annual Register of the S.P.B.A. for precocious pullets does not contain any bran. In reply to this, may I say that alfalfa meal was purposely substituted for bran, and the mash made as concentrated as possible in order that the pullets could consume a sufficient quantity for both development and production. I thank “Beginner” for his kind appreciation of “Eggs.”

“Incubation” (Norwich) refers to an article which appeared in the press some months ago by Mr. S. P. B. Atkinson, in which he stated that in nearly every type of incubator the air is too dry, and the average temperature in an incubator is much more regular than in a hen's nest. He has suggested that a sheet of india rubber covering the upper surface of the eggs prevented rapid evaporation of moisture, and that the amount of moisture and carbonic acid around the eggs was nearly equal to that present in a hen's nest. By this method an incubator giving 55 per cent. was raised to 95 per cent. hatches. As far as I can recollect the test was on too small a scale to be absolutely reliable, and there is this to be said, that an incubator giving 55 per cent. hatches must have been a very bad one, and when we are trying to arrive at results we should not deal with extremes. It is very difficult to understand that the amount of carbonic acid around the egg is nearly equal to that present in a hen's nest, for in the first place all the carbonic acid in an incubator is that which is exhaled from the growing embryos, while the very much higher percentage which is found in a hen's nest is that exhaled by the hen herself, in addition to that thrown off by the embryo. There is this fact also in connection with the difference in the temperature between the upper and lower surface of the eggs under a hen, that she more frequently turns the eggs than we do in artificial incubation. This week I have visited a farm where in a mammoth incubator of 3,600-egg size the average hatch of fertile eggs was over 82 per cent. What my correspondent should remember is that we must each study our own particular conditions. For example, the application of a thin sheet of rubber to the top surface of the eggs in this large mammoth incubator might be positively harmful, and that is equally true to a very great extent in regard to the smaller ones. The first thing to do is to find out what is the actual defect in the incubator before we apply such remedies.

M. W. (Shillington) found a cockerel which appears to have complete paralysis of the neck, was unable to stand, the wings were drooping ; it lived for 24 hours, after which he killed it. Now he has two more suffering from the same trouble, but after 24 hours these seemed to have completely recovered without treatment. From his description the birds are suffering from what is known as Limberneck. The cause may be ptomaine poisoning through eating contaminated food or mouldy grain, acute indigestion or intestinal parasites. My experience is that in the majority of cases recovery is made if a mild dose of Epsom salts is given immediately. This, however, would not apply where the trouble arose from intestinal parasites. If it was caused by acute indigestion the bird would get right itself.

POST-MORTEMS.

B. W. The post-mortem examination of the Chinchilla rabbit showed that per acute coccidiosis was the cause. In these cases the end comes so quickly that neither diarrhoea or other symptoms have time to develop, and a microscopical examination is necessary to make a diagnosis after death, as there is very little to be seen by the naked eye. As in birds, adults are frequently carriers of the coccidia without apparently suffering from their presence, and to have a tolerance to the trouble that quickly kills the young ones, which are more susceptible. The essentials in dealing with an outbreak of this disease in rabbits are the separation of the young from the adults, and the thorough cleaning out and disinfection of the hutches every other day. This interval is most important and should not be exceeded, and determined by the life history of the parasite, an is not merely an arbitrary period. I should thin that there is no doubt that the older rabbits ar carriers of the parasites, and during the time th young are with the does the hutches should be deal with in the same way, as the occysts are the destroyed before they have time to becom dangerous.

W. B. The post-mortem examination of the W pullet showed that there was an extensive inflammation of the bowels, and proventriculus, ver suggestive of poisoning by some incontact irritan poison, such as arsenic.

B. P. C. The post-mortem examination of th Leghorn pullet showed that the liver was degenerated, and that she was also very rickety Altogether a case of what one might describe a an individual essentially lacking constitutiona stamina and ability to assimilate and make th best use of the food supplied. Individuals such a this are found even in flocks of undoubted vigou and from the best of parents, but the determinin factor is not always traceable.

BRITISH BLACK BARNEVELDER CLUB.

The following have been elected Club Judges fo the current year :—Mr. W. Powell Owen, Mr. J M. Walker, Mr. T. C. Parkinson, and Mr. E Birkhead.

Good support was given to the classes for Blac Barnevelders at the Romsey (Cambs) Show, an some excellent birds were entered. Two classe for blacks are scheduled for the Sandy and District Show on 27th August, and it is expecte that they will be well filled.

A. H. C. JAMES, Hon. Secretary.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impressio that they must necessarily be scientists, pedigre breeders, or farmers on a large scale to rende themselves eligible for membership of the S.P.B.A This idea is quite incorrect. The S.P.B.A. is ou to assist all grades of poultry-keepers, from th proprietor of the 10,000-hen farm to the intensivis with his dozen or so birds; all are entitled to equa benefits. The Five Shilling subscription bring with it many advantages, namely : Free Advice b Post, a Copy of the Annual Register, the Benefit of the Discount System, and many othe advantages too numerous to mention here. Yo should write for full particulars to the Secretary TOM NEWMAN, The Beeches, Rudgwick Horsham, Sussex. The financial year begins o 1st September.

In-Shell Mortality—A Cause of Serious Losses Annually.

By **WILLARD C. THOMPSON, B.Sc.,**
Director, National Institute of Poultry Husbandry.

(Continued from Page 112.)

Dr. Dunn makes a very significant statement when e says that hatchability is in the last analysis a uestion of the survival or death of the embryo chick, nd that we must in seeking an answer to our problem ok carefully at the embryo chick as we find it within s shell. He further states that it is a common imression that chickens are peculiar among animals in he fairly high mortality which takes place before atching or birth. He cites investigations which ndicate, for example, that the young of other animals ndergo some mortality before birth, and that in rats nd swine, for instance, about a third of the embryos rmed die before birth. They are usually absorbed, nd, therefore, never seen, except when necessary peration reveals the fact, but in the case of the nbryonic chick, every death may be counted and arted, and is brought to the attention of whoever is nducting the hatch. Some of the reasons why the born of animals die are in some respects similar to e reasons which apparently account for the deaths of any embryo chicks. They frequently die because some specific defect which is harmless until the efective organ or system is required for the continued e of the individual. More than half of the chick nbryos that die during incubation die after the 17th y, and most of them on the 19th day, at which riod new systems of the chick's body are called into ay, primarily the respiratory digestive and excretive stems. If anything is wrong with any of these the ick dies. Such difficulties, while possibly very small, e yet sufficient in that stage of the chick's existence cause death. It is not necessarily a case of low tality or weak constitution, as it is so frequently agnosed. This is indicated and proven by the fact at own brothers and sisters of unhatched chicks me forth and develop in strength and vigour which ey probably would not do if there was an inherent w vitality in the family from which they sprung.

Dr. Dunn gathers from his wide and exhaustive udies that the question of hatchability is not one of neral vigour, or lack of it, but of specific factors ich act only during certain periods of embryonic e. He states that he has found no correlation tween the percentage of eggs hatched from a hen d the growth rate of the surviving chickens, which ight be used as a measure of vigour. In brief, therere, he concludes that hatching quality appears to be related to most of the measurable characters of the ther, of the external characters of her eggs and of veral of the traits of the brothers and sisters of the bryos which die.

Dr. Dunn places the problem of hatchability directly line with other problems in inheritance, and suggests that we must isolate the factors involved. and work out the inheritance of each one as it is found. While it may appear to you that Dr. Dunn's investigations do not give us anything very definite, yet is it not true that he brings up many points which suggest an answer to the problem concerned with in-shell mortality, a problem which, we must confess, has been up to the present time quite incompletely met and scarcely solved in any way?

I referred in the beginning of this paper to Dr. Beaudette's thought on the subject of in-shell mortality. He has suggested that we must not lose sight of the fact that Bacilliary White Diarrhoea is, even though we may hate to admit it, more or less generally widespread. He feels that inasmuch as we know that certain hens which are used in our breeding pens carry the bacteria pullorum in their ovarian issues, it is probable that these organisms which enter through the infected yolk of the egg are bound to exist in the bodies of the hatching chicks.

It is, of course, true that the bacteria pullorum will be in the developing bodies of the embryonic chicks. It is suggested that such bacterial infection may have a very important effect upon the embryonic development, and that it may cause mortality within the shell. It is also possible that such bacterial infection may not be limited to the bacterial pullorum. It is perfectly possible that in a flock of breeding hens which has never been tested for the detection of carriers of bacteria pullorum there may be one or several carrier hens, which, as we know, will not give any external evidence of the fact. May it not be possible that the eggs from these carrier hens, when placed in the incubators, will, if fertile, develop chicks, all of which probably are infected with the organisms which will later cause Bacilliary White Diarrhoea? May it not be possible that such infected embryonic chicks may never leave the shell, in which case a more or less high in-shell mortality would have been caused by the bacterial infection of the embryonic chicks. No evidence of Bacilliary White Diarrhoea would be shown by the normal chicks from normal eggs which came forth from that same hatch. The poultryman would have no grounds of suspecting Bacilliary White Diarrhoea, and would not be led to think that there could be such a possibility as the presence of carrier hens in his breeding flocks. It is usual, when there are carrier hens in a breeding flock for some infected chicks to hatch. This is not necessarily always the case, however. It would seem to me that Dr. Beaudette suggests a possible explanation of some causes of in-shell mortality which could well be the subject of further investigations.

CORRESPONDENCE—Continued.

per week for each society, £156 4s. Forty-three societies with their overhead charges, competing for the poultry produce of the country, and competing for the markets of the country, and there are poultry-keepers not satisfied with this number, but want to form new societies.

Yours truly,
W. HALL.

Correspondence.

THE SALE OF EGGS.

To the Editor of "Eggs."

Dear Sir,—The art of writing is to write so that the reader can understand. I quite fail to understand Mr. M. Gray's figures. Mr. Moreton Nance cooked his accounts and made a hash of them. In the issue for 1st July he states he has got 400 layers. In the issue of 20th May, page 338, he states his laying hens to be 440; his food bill for five months £94 8s. 6d., after deducting the cost of food for growing birds; his price of eggs for the year averaged about 1s. 8¼d. per dozen, including expenses, and not 2s. 3¾d. Number of eggs laid during the year 48,032 if laid by 400 hens would be about 120 each, not 137½ each; if laid by 440, it would be less than 110 each.

COST OF FEEDING.

The table given by Mr. Cluzet allows only about 90 lbs. of food per bird for a year. A bird in full production will need 100 lbs. of dry food per year exclusive of green food to produce 156 eggs, half the food will be required for maintenance, the other half for production. Mr. Nance would need about 17 ton of dry food per year. This should not cost more than the £204 named (£12 per ton). My own cost for the year £10 5s. 10d. per ton. At the present time a commercial poultry farmer should be able to buy food to produce the maximum amount of eggs at not more than £11 per ton average. The following monthly account is taken from my balance sheet for last year, audited and put in order by Mr. G. H. Garrad, N.D.A.:—

SALE OF EGGS.

Month.	No. of Eggs Sold.	Aver. Price. Per Doz. s.	d.	Income £	s.	d.
1923—Nov.	1,417	3	6	20	13	3½
,, Dec.	1,699	3	4	23	9	0
1924—Jan.	5,140	2	5	52	1	6¼
,, Feb.	6,864	2	0	57	18	4
,, March	8,473	1	7	54	18	7½
,, April	10,417	1	3	55	3	4
,, May	7,441	1	4	41	0	0½
,, June	9,181	1	6	58	0	3½
,, July	7,022	1	10	55	5	6
,, August	6,833	2	2	62	9	10¼
,, Sept.	5,829	2	5	58	3	6
,, October	5,826	2	11	71	13	5½
	76,142	1	11	£610	16	9

In view of the interest on grading eggs, I give a table below of 2nd grade. These consist of small eggs laid by pullets and eggs cracked or badly soiled:—

Month.	No. of Eggs Sold.	Aver. Price. Per Doz. s.	d.	Income. £	s.	d.
1923—Nov.	39	3	0		9	9
,, Dec.	14	2	9		3	4
1924—Jan.	105	2	1		19	1½
,, Feb.	104	1	8		15	8
,, March	79	1	2		8	2½
,, April	104	1	0		8	8
,, May	94	1	0		7	10
,, June	126	1	0		12	4½
,, July	130	1	5		16	1
,, August	119	1	9		17	8½
,, Sept.	125	⅝ 1	10		19	6
,, October	88	2	5		17	5½
	1,127	1	8	£7	15	8½

Total eggs 77,269, about 1s. 11d., £618 12s. 5½d.

Sold for domestic purposes (in addition 3,044 were disposed for other purposes and 3,294 set at home). Total eggs produced 83,607.

Cost of food, not deducting manurial value	£342 10 6
Income for eggs over cost of food	£276 1 11½
	£618 12 5½

As there are other sources of income in additio to the sale of eggs, and other sources of expendi ture in addition to buying food, this figure canno by any stretch of imagination be called eithe gross or nett profit.

Yours faithfully,

"WIRELESS."

Re CO-OPERATION.

Dear Sir,—I am not a member of any Co operative Society. I do not see the use of bein a member if a society like the Co-operative Poultr Products, Ltd., is going to submit all produc sent to them to the auctioneer's hammer, thu adding the overhead charges of an auction mart in addition to those of the society. Just as wel sell in a local auction mart, and save cost o transport. I sell my eggs direct to the retailer and it is quite unnecessary to grade or candle m eggs, except that small and cracked eggs are sol as "seconds." Will Mr. Foulkes tell us, throug "Eggs," the price paid for eggs to the produce by the Society, after all expenses have been de ducted, including transport to the depot, durin July?

My sale of eggs for July, wholesale—no expense to deduct, was :—

9,306 eggs, 1st grade, average 2s. 0½d. per doz.	£79 2 8
191 eggs, 2nd grade, average 1s. 9⅝d. per doz.	1 7 8
	£80 10 4

791 dozen and 5 eggs, average 20.3/5d. per dozen.

There are 43 Co-operative Egg and Poultr Societies with a turnover of £349,262; averag

(Continued at Foot of Column Previous Page).

APEX HOUSES.

Dear Mr. Newman,—Owing to my absence abroad I have only just seen "Eggs" of July 29th.

As far as I personally am concerned, Mr. Somerville is in no way responsible for my building an Apex house. In point of fact, it was an article written by Mr. Toovey, in "Eggs" which decided me to erect one as a trial.

I studiously avoided the small houses described by Mr. Somerville (being in France I cannot quote chapter and verse), and I think he may possibly be right in the matter of the angle. Personally, I am not surprised at his scrapping the small houses. I would suggest that in the house I have built the difficulty he mentions need not obtain.

Speaking from memory, my perches are from 4 to 9 feet away from the span roof, and there is ample space for all foul gasses to escape.

Mr. Somerville suggests my roof felt will "pant" as I have no wire netting outside. It cannot do so to any appreciable extent owing to the number of clouts used. There is no bigger surface unclouted than 2 feet one way and 2 feet 6 inches the other. If the trouble he anticipates should arise, it would certainly not add appreciably to the cost to do as he suggests.

With regard to Mr. Somerville's last paragraph, I by no means consider 4 square feet the correct area per bird, nor do I say so. I merely took that figure in order to obviate all the "cranks" in the poultry world rising up to accuse me of exaggeration. Personally, without wishing to dogmatise, I consider 3 feet ample for semi-intensive work.

As this subject of ventilation is so all important, I should be quite pleased to submit my Apex houses to any test, which you, Sir, and if possible, Mr. Somerville, may think useful because if my house turns out what I hope, we have gone a long way towards reducing housing costs.

Yours faithfully, FRANCIS J. HEMELRYK.

COCCIDIOSIS.

Dear Sir,—I think the following account of my experience with two attacks of coccidiosis may be of interest to your readers. It is in each case the account of an attack, of a certain treatment, and of the complete disappearance of the disease within a fortnight of the commencement of that treatment :—

I should like to emphasise two points to begin with. It had no effect, so far as I could see, upon any bird already sickening with the disease, and, in my opinion, these two cases are not sufficient to establish that the disappearance of the disease after the treatment was really more than a curious coincidence. I therefore do not put the facts forward as proved cause and effect. I merely state the succession of events, and leave others to form their own judgment.

The facts are as follows :—In the spring I began to lose my 5—6 week old pullets and cockerels in increasing numbers until I thought it well to send two or three up to "Eggs" for a report. The diagnosis was "Coccidiosis." Catechu proved useless. Deaths increased to 15—20 per day, and it seemed that I had nothing to do but watch the rapid extinction of my 2,000 young stock. I had already lost about 200 birds when it occurred to me that every healthy animal has considerable powers of resistance to a manageable number of microbes, and that, if I could destroy the excessive millions on the floor of the brooder house continually being passed out in the excreta of the ailing birds, there might still be quite a fair number of birds unaffected, which could tackle the survivors that they might come across by means of the natural defensive equipment of their own bodies.

I decided, therefore, to spray the floors **every day** for a week with a strong solution of Jeyes' Fluid. I thought it quite possible that a continuous diet of Jeyes' Fluid might itself kill the chickens, but, as it was obvious that they couldn't be any "deader" of Jeyes' Fluid than they were going to be of Coccidiosis, I went ahead. I used half-pint of Jeyes' to 2½ gallons of water. For four days there was no result, then the deaths began to drop rapidly to 3—4 per day, and before the end of the second week's spraying the disease was finished—there were no deaths at all, and there has been no recurrence.

Three weeks later my brother, whose poultry farm adjoins my own, began to lose chicken. Diagnosis gave it Coccidiosis, as in my own case, but he did not wait for the diagnosis. His maximum loss was eight in one day, and then he turned the spray on. Deaths began to go down almost at once, and ceased at the end of the second week's spraying. Total loss 50. No recurrence so far.

Now are these two cases of curious coincidence or of cause and effect? In any case I think it might be worth the while of any one afflicted with this appalling disease to make a further experiment and publish the result for the benefit of others, and it is worth noting that if there is anything in the theory of keeping microbes down to manageable numbers, the same treatment might lessen the terrors of B.W.D. or of any other disease spread by infection of floors and litters.

At any rate, the chickens thrived on Jeyes' Fluid, so there seems to be no danger from that source.

Yours faithfully, D. MUNTZ.

(My correspondent's letter is interesting, and there is doubtless much in what he has to say, but may we point out to him that the disease did not appear in his own flock until his pullets were five or six weeks old, and after this age has been reached the resistant power of the bird is very greatly increased, and the mortality naturally considerably lessened. We do suggest that the spraying of the floors did no good; it probably helped considerably, but we feel that this important point should not be overlooked as to the increased resistance of the birds, and the consequent lower mortality after they were six weeks old. —Editor.)

Re APEX HOUSES.

To the Editor of "Eggs."

Dear Sir,—I have read with interest Mr. Winthrope Somerville's letter in your issue of the 29th ult.

I particularly note his words of warning to those who intend to adopt this type of house, but this warning seems to me to be unnecessary if proper construction is followed. He states that the angle between the floor and the sides forming the apex need not be greater than 60 degrees, and apparently condemns a lesser angle than 50 degrees to efficiently secure the induced current of air. He perhaps would hardly credit it that in an experience extending over some years I have found that properly constructed apex houses, with an angle of 45 degrees, provided the ventilation is properly arranged through the floor (as it is in the houses associated with my name), there is no risk of the banking of foul air as suggested by him. Indeed, in any houses in which air inlets are on the front or side, there is, in my opinion, a far greater risk of the banking of air at the top and sides than in the type of house constructed by myself. This type of house gives throughout the length of the house and through the floor in the angle made by the sides an inlet of air of 8 inches throughout the length of each side of the house, which inlet, no matter which way the wind blows, causes a current of air to pass through the house which finds vent through the ventilation provided along the ridge.

As the warm air from the birds ascends this warm air leaves the house by the ventilation along the ridge of the house, being the meeting point of the two sides. The birds are protected from any sudden draught, as the dropping boards break the current of air coming through the ventilation spaces in the floor, and constant ventilation results.

As I gather that Mr. Winthrope Somerville objects to floor ventilation, and as I have proved that this in practice is a better manner of inducing proper ventilation than any other form of inlet of air, and prevents the banking of foul air to which he refers, and as I hold many testimonials to this effect from people for whom I have manufactured Apex houses, I think that, although Mr. Winthrope Somerville considers and states that he has proved that an angle of 45 degrees in these houses and ventilation through the floor causes banking of foul air and other disadvantages, yet the "proof of the pudding is in the eating," and it is obvious that I have succeeded with the very thing which he condemns.

But the essence of success in construction lies in the methods which I have adopted, and which are reflected in the Apex houses associated with my name, which have now been on the market for some time.

The only conclusion I can arrive at is that Mr. Winthrope Somerville is so pleased with his own method of providing ventilation as to be prejudiced against any other.

In view of your insertion of the letter from him, I shall be glad if you will, in common fairness, insert this letter in your next issue.

I am, Sir,
Yours faithfully,
R. A. DIXON.

CO-OPERATIVE POULTRY PRODUCTS, LTD.

Dear Sir,—In last week's "Eggs," in the Correspondence columns, we notice a letter signed by "No. 158," referring to the C.P.P., Ltd. He wishes to know what other members of the S.P.B.A. think about his dealings with the above-named society. We are pleased to state our experience as follows :—Early in May we wrote the C.P.P., Ltd., asking what price per lb. they were offering for heavy breed chickens, weighing from 2½ to 3 lbs. in weight. We also wrote a similar letter to a person dealing on the London market. The C.P.P., Ltd., replied stating that they were paying about 5s. each for chickens round about our size. The London firm stated that they were paying from 2s. to 1s. 9d. per lb. less 5 per cent. commission, and a charge of 3d. per bird would be made for plucking.

We decided to send the birds to the C.P.P., Ltd. Eventually we received word that the birds had arrived safely, and that payment would be made to us as follows :—21 birds, 53 lbs. at 3s.—£3 3s.; nothing was said about what had happened to the other 2s. per bird. We wrote the C.P.P., Ltd., for an explanation, and we were allowed another shilling per bird, and stating that they thought the birds were Light Sussex. We do not accept that explanation, because we filled in one of the forms which "No. 158" refers to, stating what breeds of poultry we kept, and Light Sussex was not one of them.

In closing, we should like to quote from a pamphlet we received some time ago from the C.P.P., Ltd. (paragraph II.):—"It has been decided that birds shall be bought outright by the Society, and the prices which will be paid will be based on the live market price (THE LONDON MARKET PRICE AS A GENERAL BASIS) on the day of the receipt of the birds."

On a previous consignment that we sent to the C.P.P., Ltd., we were allowed 1s. 3d. each on four 1924 White Leghorn cocks, and 3s. each on two fat old hens, one of which weighed 6 lbs., and the other five.

We have wondered, like "No. 158," what other members of the C.P.P., Ltd., thought about it.

Yours truly,
p.p. Finney Bros.,
J. S. FINNEY.

Practical Ration Making

Principles and Practices.

By **WILLARD C. THOMPSON**, **B.Sc.**,
Director, National Institute of Poultry Husbandry.

The poultry industry, like other branches of agri- lture, must be governed in these days by general onomic conditions prevailing in the country. Perhaps is even a bit more significant in the poultry industry ecause the products of the poultry farm enter so con- antly and so intimately into the daily life of the eople. The basic product of the average poultry flock the table egg. The business of producing table ggs must be governed by the possible and probable arket, which in turn must in the last analysis be verned by the attitude of the ultimate egg con- umers. In other words, in planning a business of g production, the ability and willingness of the neral public to pay certain prices for eggs must ter as a significant factor in establishing the average arket price for eggs.

From time to time when we talk about the greater velopment for the poultry industry in this country e are met with the argument that prices received by ultry producers for eggs are not sufficiently high allow of a fair profit to those engaged in the busi- ss of egg production. We are often asked if the ture probably will present higher prices, and, there- re, better business possibilities for the egg producer. am not a pessimist, but, on the other hand, rather optimist, as to the future of poultry-keeping, but do not believe that we can safely look forward to a ture in which there will occur any very marked crease in market prices for eggs. There is a limit hich the average people cannot go beyond when buy- g eggs for every-day use. I do not know that we e at present receiving that limit, but I daresay at we may be receiving a price that is not far below If this be true, how is the poultry and egg pro- icer in the future to conduct his business so as to cure a reasonable profit on money, time, and labour vested? The egg-consuming population continues grow, and the comparative consumption of eggs ows a slightly upward, but more advancing curve; ile in order to meet this demand the country con- ues to import vast quantities of eggs annually. This ct establishes a need for the development of a home ultry industry, and points to a possible cupation for a very large number of people. means, then, that the poultry industry ust be permanent, and that in spite of e fact that we may not safely look forward to eatly-increased prices, we must develop a type of lustry that will meet the situation at least with some easure of success. I cannot but believe that this eans more efficient production and a cutting down costs.

Among the various factors which determine the cost egg production, one of paramount importance is t of feeding. It has been in line with my duties for a number of years to visit some several hundreds of poultry plants. I have been impressed again and again by the fact that the feeding of poultry is too often done in a more or less haphazard way, and without the careful attention that should be given to that part of poultry management. In these days and times, every pound of poultry food stuff costs real money, and no poultryman has the moral right to misuse a single pound of foodstuff. I am convinced that if poultrymen are to use the various foodstuffs available with greatest possible economy, they must study the problem of poultry breeding from every possible view point, and then determine upon a more or less fixed ration, which will give to their fowls the required food nutrients at lowest possible cost. The problem of making a practical and economical poultry ration is not an easy one, because there are so many factors involved. The laying flock is the unit of fundamental importance on the average poultry farm, and the successful and economical feeding of that flock will either make or break the financial success of the venture, and, therefore, for that reason, and because of the limitation of time, I am going to confine what I shall have to offer this afternoon to the subject of practical rations for laying hens.

The poultry feeder must bear in mind that in the preparation of an economical and practical ration he must accomplish two distinct objectives. In the first place, the body of the fowl must be maintained, not only in natural physical condition, but in condition to make possible the useage of a relatively enormous quantity of raw food materials, which must be taken into the body, digested, and transformed, and turned out as the finished product—eggs. The various working tissues of the hen's body is constantly wasting and wearing, and, therefore, as fast as destruction takes place, repair must follow, and that repair demands the expenditure of energy. The poultry feeder, especially when he is feeding for winter egg production, must arrange a ration that will maintain the bodies of his fowls in good condition, and in good order, rendering them capable of standing up under the more or less forcing methods of modern poultry-keeping. It is scarcely necessary for us, as practical poultry-keepers at this time to go deeply into the subject of just what maintenance rations must be, or even what percentage of the total ration will be used for maintenance purposes. It is rather for us to attempt to arrive at a ration which will accomplish what we desire, namely, economical egg production, while at the same time maintaining the bodies of the fowls in health and good conditions of flesh. I believe that we can best measure our attempt to furnish a sufficient maintenance ration by the results obtained. We depend upon pullets usually for the greater part of our winter table egg production They are layers which have but recently come into that function. It is vitally important that every hen, and particularly every pullet entering the winter season for egg production, should be in good condition of flesh before making the start. The ration, which is fed during late autumn and early winter days, therefore, must be particularly efficient as a maintenance or conditioning ration. If laying hens do not enter the winter season with an egg surplus of fat and flesh, they cannot possibly stand up under a prolonged season of egg production. Throughout the laying period comparatively high demands are being made constantly upon the bodies of the birds in order that egg production may be kept up. In the second place, poultry-feeders must prepare a ration which will provide those nutritive elements that are especially essential to egg production. Certain amounts of the usual food nutrients, proteins, carbohydrates, and fats are needed very much to manufacture eggs; we have, therefore, two very distinct objectives in the feeding of laying hens which must be combined inseparably, but, nevertheless, really.

The experience of commercial egg producers, and the research and experimental work done by scientific poultry workers point out with more or less definiteness certain relationships that should exist between protein, contents of laying rations, and the carbohydrates and fats. This relationship when expressed numerically we term the nutritive ratio

In discussing a practical ration, I am going to give as an example a ration which I have used for more than twelve years, under conditions that are not greatly different from those which pertain here. Incidentally you may be interested to know that this ration which I am about to give you for your consideration is one of a number with which we are proposing to conduct a series of experiments on the new plant during the coming winter and following season.

I believe that the practical egg-producing ration must roughly be divided into four more or less distinct parts, the first two being major in importance. I would give as the first essential part of a ration a mixture of grains, which, in terms of common usage among many poultry-keepers, might be called the scratch grain ration. A daily ration of hard grain is essential for two important reasons. In the first place it is from this part of the ration that the greater amount of maintenance material is to be derived. It has been my experience that the proper use of the scratch grain ration would regulate the flesh and physical condition of the hens, and that, therefore, the combination of grains in it should be most carefully worked out, and then the proportion of scratch grain ration to the balance of the entire ration most carefully watched and managed. The unskilled or inexperienced poultry-feeder will perhaps make his greatest errors in poultry feeding in connection with this part of the ration. I would suggest that several points concerning the scratch grain ration ought to be considered by every poultry-feeder.

(To be Continued).

GLAMORGAN AGRICULTURAL COMMITTEE COUNTY EGG-LAYING TRIALS, 1924-1925.

From 19th October, 1924—22nd August, 1925.

Report for Tenth Month.

Figures are Total Points to date:

Light Breeds—J. Joshua, Tondu (W.L.), 475; R. J. Evans, Abertridwr (W.L), 451; Howell and Phillips, Barry (W.L.), 406; Mrs. E. H. Parry, Llantwit Major (W.L.). 369; D. Hopkins, Port Talbot (W.L.), 416; Mrs. C. I. Rich, Dinas Powis (W.L), 361.

Heavy Breeds.—J. Joshua, Tondu (R.I.R.), 635; R. J. Evans, Abertridwr (R.I.R.), 616; A. Evans, Barry (R.I.R.), 547. Harrop-Griffiths and Hall, Bridgend (R.I.R.), 474. J. R. Thomas, Barry (R.I.R.,) 450· J. Arnett, Clydach (W.W.), 481.

During the tenth monthly period dry mash birds laid 1,015 first-grade eggs; 356 second-grade; 13 underweight; wet mash birds laid 662 first-grade; 266 second-grade; 9 underweight.

Coccidiosis.

GEO. ATKINSON, M.R.C.V.S.

The title of this paper is "Coccidiosis," but, as Coccidiosis is too large a subject to be dealt with in a short paper, I propose to confine my remarks to Avian Coccidiosis, and, as there is nothing new to relate about this disease, I shall recapitulate briefly the life history of the parasite, symptoms, etc., and deal more fully with Control and Prevention, as these appear to me to be most important in view of the present state of our knowledge concerning the medicinal treatment of the disease.

Coccidiosis is a parasitic disease which, in fowls, involves the intestine primarily, and which frequently causes great mortality in chicks from one week to two months old. In fact, it is generally accepted to be second only to Bacillary White Diarrhoea in economic importance to the poultry industry of this country.

As the bird gets older its natural resistance to the disease increases until the adult bird may harbour the parasite without showing any symptoms.

The parasite may attack all varieties of domesticated and wild birds, but infection is likely to be spread more quickly from bird to bird when they are kept in large numbers in captivity. Thus when the parasite is introduced into a poultry farm, it may cause a total loss of the young stock.

Coccidiosis also sometimes causes great mortality amongst pigeons, pheasants, grouse, turkeys, ducks and other birds, tame and wild.

The death rate varies according to the severity of the infection (i.e., the number of oocysts available for consumption), the cleanliness of the poultry plant, the sanitary arrangements, and the general health of the birds. The mortality may be as great as 100 per cent. in some outbreaks and in others, although the mortality is less, the survivors remain stunted and useless.

Etiology.—The parasite causing this disease i known as the "Eimeria Avium,' and it belong to a branch of the larger family, "Coccidia."

Life History.—The life history of the Eimeri Avium may be found in any text-book on disease of animals or birds, but, to put it very briefly, has three stages, two of which are passed withi the bird, chiefly in the epithelial cells lining th intestine, while the third is passed on pasture o wherever the excreta of the diseased bird happen to be dropped. In this last stage the parasit takes the form known as the Oocyst, and it is th form which is responsible for spreading the diseas The oocysts are not infective when they are voide by the diseased bird, but require a certain leng of time to mature. This time varies from 24 hou under the most favourable laboratory conditio

.o twenty-five days or more under favourable out- f-door conditions. It is important to remember hat the envelope of the oocyst is very tough, and vill resist the action of disinfectants used in their rdinary dilutions.

Unfortunately, very little exact work appears o have been done on this point, but I think it is enerally accepted that quick-lime, the cresols and rude creosote will destroy the parasite, or at least estroy its power of sporulation.

Symptoms.—There are no characteristic symp- oms on which one can make a diagnosis of occidiosis. Diarrhoea is the most important ymptom in chicks. The droppings are semi-fluid nd usually whitish in colour, but they may be uite fluid and have a brownish tinge. In very cute cases the droppings may be deeply stained ith blood. In addition to diarrhoea, there is eakness, rumpled feathers, drooping wings, a unched appearance, loss of appetite, sleepiness, ıd eventually great emaciation. In the very acute ıses death usually takes place in two or three ıys, but less acute cases may linger for two to ur weeks.

In adult fowls the disease usually assumes a ore chronic type, although outbreaks of the acute pe do sometimes occur. In the latter the bird sumes the dejected, drooping appearance with ss of appetite, which is shown in many illnesses. the sub-acute cases the bird develops a pro- essively increasing listlessness, and stands apart om the others, only taking an interest in life feeding time, when the appetite appears normal may be even ravenous. These symptoms may shown for from two to three weeks, at the end which the bird may die quite suddenly after a ort period of unconsciousness.

In the more chronic form the comb and wattles ıy be pale; the appetite seems to be normal ıile the bird is feeding, but the total amount con- med is usually less, as the bird has not such a od appetite as the others, and takes little in- est in grubbing. This state may continue for eral weeks, and end in death if the source of infection is still present.

maciation is marked both in the sub-acute and onic cases. Leg weakness and paralysis are quently observed.

eynen gives the following description of an out- ak of Coccidiosis in fowls $3\frac{1}{2}$ months old, in ich paralysis was the chief symptom.

n carcases submitted for examination Coccidia re found in great numbers in the caecum and intestinal mucous membrane; there was great aciation while the crop was always full. The ıptoms shown were as follows:—The paralysis shown principally in the feet. The birds sat vn abruptly, their feet stretched out, and wled along the ground helping themselves along flapping their wings. Sensibility of the feet maintained, and there was no general alysis. The appetite was normal. The course of the disease was 7 to 15 days, the fowls becoming extremely emaciated.

Post-mortem appearances.—The post-mortem appearances of Coccidiosis are by no means characteristic, and a definite diagnosis can be made only after a microscopical examination of the excreta, the intestinal contents, or the intestinal mucous membrane. The lesions are in the intestinal tract, and are most noticeable in the caeca. In acute cases in chicks the caeca may be filled with a blood-stained semi-solid mass which distends the caeca, and may be seen through their walls. Extremely acute cases sometimes occur in chicks in which the caecal contents are quite fluid, and appear to be nothing but blood, the unopened caeca being dark red in colour.

Occasional cases have been seen in chicks in which the liver was affected. The liver showed yellowish-white circumscribed areas, varying in size up to that of a threepenny-piece, and rather resembling the lesion of "Blackhead" in turkeys.

In older fowls the caeca may or may not be distended. In many cases the distension is marked, and the caeca are firm to the touch over a considerable extent of their length. Haemorrhagic patches or whitish spots may be seen in the caecal walls. One caecum only may show lesions, but usually both are affected. The caecal contents in such cases consist of a solid mass, greyish in colour and cheesey in consistency. The mucous membrane is completely degenerated and forms part of the mass. The lining membrane of the duodenum is usually congested or haemorrhagic.

On seeing such lesions in conjunction with the symptoms previously described, one should strongly suspect the disease to be Coccidiosis, but the disease may be present, especially in the sub-acute or chronic form, without lesions being apparent to the naked eye. Therefore, microscopical examination is essential before arriving at a diagnosis.

Diagnosis.—The diagnosis of Coccidiosis is, fortunately, comparatively simple, providing that one possesses a microscope and sufficient knowledge to be able to recognise an oocyst on sight. A little of the contents of the caecum is taken, and, if necessary, mixed with distilled water on a glass slide, and a cover-glass is placed over the mixture, which is now ready for examination. With a magnification of about 300 and reflected but reduced light the oocysts will be seen as shining, oval bodies with a double envelope and a granular material occupying the centre, while at each end is what appears to be a clear space.

In cases which have died in the early stages, the oocysts may not have developed, and then it is necessary to make sections of the intestinal wall.

One has seen very acute cases in which the caecal contents appeared to be nothing but blood, and were crowded with merozoites but no oocysts.

(To be continued.)

Bacillary White Diarrhoea

Its Control and Eradication.

By **T. M. DOYLE, F.R.C.V.S., D.V.S.M.**

It is impossible, I fear, to deal comprehensively with this disease in a short paper, and, as you are already familiar with many of its characteristic features, I propose to treat only with certain points which are of practical interest, and which have recently been investigated.

Since Rettger in 1908 discovered the causal agent of B.W.D.—the *B. pullorum*—and proved that it was the actual cause of the disease, a great amount of knowledge has been accumulated. The greater part of this is due to the work of American investigators, and particularly to Rettger and his collaborators. They worked out the life cycle of the parasite, proved its localisation in the ovary of the "carrier" bird, and its transmission through the egg.

There is no record of when the disease was first introduced into Great Britain, but it has probably existed here for a very long time, and its present prominence is due to the great expansion of poultry farming during recent years, and more particularly to the increased employment of artificial methods of incubation and the large unit system.

Chicks hatched under hens are just as susceptible as those artificially incubated, but the mortality is smaller, and there are fewer "carriers" amongst the survivors. This is partly due to the dark warm atmosphere of the incubator being favourable for the survival of the causal parasite, while under natural conditions the light and temperature have an inhibitory effect, and rapidly bring about its death.

As hen-hatched chicks also are continually on the move, the infection is disseminated over a wide area, and the same conditions do not occur as in a crowded brooder house.

The symptoms shown by affected chicks are common to several diseases. They are, therefore, of little assistance in making a diagnosis.

The history of an outbreak is, however, of some value. When a heavy mortality occurs in a hatch during the first four or five days of life, and the majority have diarrhoea, and provided there has been no mismanagement, the possibility of B.W.D. being present must be seriously considered.

The naked appearances found on post-mortem examination are not sufficiently characteristic or constant to enable a definite diagnosis to be formed. If the attack has been acute there will not have been sufficient time for changes to have occurred.

The light-yellow colour of the liver, which is frequently mentioned as a lesion of the disease, is merely its normal appearance during the first few days of life, and gradually changes to dark brown. Congestion and necrotic nodules in the lungs are the most characteristic lesions found; these occur, however, in only about 40 per cent. of cases. The necrotic nodules are frequently attributed to aspergillosis, due to a fungus- *A. fumigatus*—a condition which is not common i chicks, at least, in this country.

Pnemonia, with purulent foci, is frequently en countered in incubator-hatched chicks, and such case may easily be mistaken for the lesions found in th specific pneumonia of B.W.D.

A bacteriological examination is the only reliab method of discovering the presence of the diseas and, in my opinion, no confidence can be placed in diagnosis based on the naked-eye appearance found post-mortem examination. Furthermore, the cons quences which may arise from a mistake in this respe are too serious, both to the breeder and his clients, justify the employment of unreliable methods.

During recent years, at the Ministry's laborator the bacteriological examination of large numbers chicks, suspected of B.W.D., has shown that not on 60 per cent. were infected with this disease and per cent. had died from other causes. These figur prove the necessity of accurate methods and justify th carrying out of a detailed bacteriological examinati in every case.

THE PERCENTAGE OF CHICKS WHICH SURVIVE A OUTBREAK THAT BECOME "CARRIERS."

Rettger and his collaborators have shown that o of eighty-eight chicks which were artificially infecte 21 (23 per cent.) gave positive reactions to the aggl tination test one year later.

We have tested twenty-one chicks, two months ol the survivors of an outbreak, and found eleven or per cent. infected As the outbreak through whi these chicks had passed was of the average type, wi about a 70 per cent. mortality, it may be conclud that in the majority of cases about half the chic which survive become carriers.

Some breeders state that all chicks are affected w the causal organism of B.W.D., and that as t result of weak constitutions, climatic conditions, dietetic errors, the disease makes its appearance. evidence has been produced to substantiate this theo and in some cases, at least, it is brought forw merely as an excuse for having sold diseased chicks.

A detailed bacteriological examination has be made of a large number of known healthy chicks varying ages, and from many hatches, and in instance have we succeeded in isolating *B. pullorum*. It is reasonable to conclude, therefo that this organism is not a normal inhabitant of healthy chick

INFECTED EGGS.

Most workers on this disease have confirmed original finding of Rettger that the *B. pullorum* transmitted through the egg laid by the carrier bi It is generally assumed that only a small percent of eggs are infected, but as there appeared to be accurate information on this point, the follow experiment was carried out:—

Fourteen carrier birds were trap-nested for a pe of 110 days during the months of March, April, M and June. These were pure-bred birds of four di rent breeds (W/L, W/W, L/S, R.I.R.). They w well fed and kept under the best of conditi throughout the test.

The total number of eggs laid was 341, an average of 24 per bird. The *B. pullorum* was recovered from the yolks of nine, giving a percentage of 2.6.

Only four of the fourteen birds laid infected eggs. As, however, the organism was recovered from the ovary of all the remaining cases, it is reasonable to assume that if the observations had been continued infected eggs would have eventually been found in every case

The percentage of infected eggs laid by the four birds mentioned above was:—8 per cent., 3 per cent., 14 per cent., 18 per cent. respectively.

It may be concluded, therefore, that infected eggs are laid at very irregular intervals, and that the percentage, at least in some cases, is much higher than was generally supposed.

Two birds (Nos 155 and 177) laid 46 and 53 eggs respectively, and none of these were infected. The large number of healthy eggs laid by these two carriers provides an explanation of those cases which are frequently met with where some hatches are healthy, while others are diseased, although the eggs are from the same stock.

The egg-yield from the remaining twelve birds was very low, as the following results will show:—

16, 15, 19. 22, 16, 6, 22, 12, 15, 3.

This observation is important, as it proves that the egg-laying powers of the majority of carriers are very seriously impaired as a direct result of the disease.

The carrier hen, therefore, is unprofitable as well as dangerous. It is of interest to note that the egg white was never infected with *B. pullorum*, although we have found that it has no inhibitory effect on the growth of that organism, as it has been shown by Fleming and Allison to have for certain other organisms.

(To be continued.)

"LEICESTER MERCURY" COUNTY LAYING TRIALS.

Officially Supervised by the Leicestershire County Council Agricultural Education (Joint) Committee, Horticultural Sub-Committee

11th Monthly Report for the Period July 13th—August 9th, 1925.

Mr. W. Rolling reports that the result of the eleventh month of the above trials, terminating on August 9th, shows a slight decline in the number of eggs produced—1,571 eggs, as against 1,598 for the previous month. This gives an average of 14.2 eggs per bird, or slightly more than 3.5 eggs per bird for each of the four weeks The total number of eggs laid during the 44 weeks is now 19,885, an average of 177.5 per bird, and of this number 83.9 per cent. were first-grade. There has been a slight increase in broodiness among the heavy breeds, and a few birds have started to moult, but all birds are in good health and condition, and no case of infectious disease has occurred throughout the trials to date. One bird, Mrs. R Crawford's White Leghorn, Pen 2, No. 3 died from a tumourous growth on the oviduct and peritonitis. The positions of the competing pens are practically the same as last month. The best performance for the month has been made by Mr. T. F. Wildman's pen of R.I. Reds, which laid 117 eggs, or 19.5 eggs per bird. This was closely followed by Mr. E. Hill's pen of R I. Reds, which laid 114 eggs.

The position of each pen and total eggs is given below:—

Section 1. Division A. Light Breeds (Six Birds).—Mrs. R. Crawford (W.L.), 1188 eggs; Crawford and Dowell (W.L.), 1031; J and A. Moore (Bl.L.), 912; Alan Kemp (Bl.L.), 819.

Section 1. Division B. Heavy Breeds (Six Birds).—T. F Wildman (R.I.R.), 1337. Mrs. E. Ball (R.I.R), 1175; Crawford and Dowell (R.I.R), 1218; Lady Dorothy Fraser (R.I.R.), 1181; C. B. Payne (R I.R.), 1126; Miss G. Belgrove (R.I.R.), 1099.

Section 2. Any Breed (Two Birds).—J. T Kidger (W.W.), 428; Geo Gilliver (W.W.), 402; Geo. Stevens (An.), 424. Miss D. Walton (W.L.), 365· Mrs G. Gilliver (R I.R.), 283.

H. T ATKINSON,
County Instructor in Poultry Keeping,
6, St. Martin's. Leicester.

ANSWERS TO QUERIES—Continued.

W. D. (Burnley) refers to a statement in another journal to the effect that of all cereals maize germ meal is superior to any others in a poultry ration. He asks:—" Is it worth the extra money it costs to buy this instead of ordinary maize meal? " I cannot say it has been demonstrated by actual feeding experiments that maize germ meal is superior to other cereals in a poultry ration, and I do not think it is worth the extra money it costs to buy this instead of ordinary maize meal. I was the first to recommend maize germ meal for poultry, but in those days it was cheaper than maize meal. I would not pay one penny more for maize germ meal than I would for a good sample of maize meal at the present moment. The statement that it is superior to any other cereals is very misleading. Certainly for growing stock it is not comparable with ground oat. In answer to my correspondent's second question, the stove to which he refers, and of which he asks my opinion, is a very sound investment, and it is perfectly true that sprouted oats give greater fertility in winter. With regard to autumn colds in pullets. These are always prevalent, and one of the most common causes is allowing young pullets to crowd into the corners instead of getting them on to the perch early, as also is overcrowding in the Colony houses, and insufficient ventilation. Assuming these causes to be removed, sulphate of copper in the drinking water as a preventive will be found fairly effective. The correct formula is to dissolve four ounces of powdered sulphate of copper in a quart of water, and add one ounce of the solution to every gallon of drinking water, and allow the birds nothing else to drink, but if used as a preventive half the quantity should be given every day. The sulphate of iron which my correspondent suggests would not be effective for this purpose.

T. F. N. (Knockholt) asks me to explain in these columns the difference between Early Maturity and Precocity. It may be there is a distinction without a difference, but when we are speaking of something which is precocious we mean something which is ripe before the usual, or, shall we say, the proper time. In an article on breeding, which appeared in the Register last year, I tried to define a precocious as apart from an early maturing pullet. They are not figures on which one would care to dogmatise. I should define as a precocious pullet in the light breeds, one which laid before it was 160 days old, and, in a heavy, before it was 180 days old. Now we have to distinguish between precocity and early maturity. Any light breed pullet which laid between 155 and 190 days I would call an early maturing pullet, and for a heavy breed would extend the time to 210 days. After that they would be described as late maturers, but I am not attempting to lay down an arbitrary law. My correspondent remarks :—"I have some cockerels amongst others saved for breeding, hatched in late February, which stood out prominently from all the others, from the chicken stage. They now look like fully matured birds ; they bully all the others, and when fed with grain they call invisible hens to feed. They are of fair size, but not on the large size." These birds appear to me to be rather precocious. That is, there is too early sexual development. My correspondent should watch them to see how it affects their future development. Often this precocity is detrimental to the future development of the bird. I am afraid I have failed very badly to define exactly what I mean by early maturity and precocity.

"Ration" (Warwick) wishes to know whether I would advise him to commence feeding his White Wyandotte pullets five months old on an all-mash ration. They were reared on a wet and dry mash and grain system, but for the last two months have been fed on dry mash and grain only. I cannot think it is advisable to feed on an all-mash ration, especially as the winter months will soon be here. I would advise him to feed a dry mash ration entirely as follows :—1 lb. bran, 1 alfalfa meal, 1 ground oats, 1 maize meal, and one meat and bone meal, and as the last feed give a good heavy feed of grain—as much as the birds will pick up in twenty minutes, preferably kibbled maize. The dry mash hoppers should be open all day, and if he wishes to give a wet mash in addition this should be given at mid-day.

INDIAN LAYING TEST.

WELCOME FOR BRITISH COMPETITORS IN SIXTH ANNUAL.

Much good has been done to British prestige in poultry circles in India by the wins recorded by British breeders in past years in the Indian Laying Test.

The U.P. Poultry Association of India has decided to run another three months' Egg Laying Test, to be carried out from 1st November, 1925, to 31st January, 1926, at the expense of the U.P. Poultry Association, in the Association's ground, Lucknow, India. Competition will be open to all poultry-keepers. Each pen will consist of one pullet only, entries closing on 1st September, 1925. Many valuable prizes will be awarded to the owners of the birds producing the greatest number of eggs, in accordance with the rules during the competition.

Special certificates of merit will be awarded in the case of each individual pullet scoring 50 eggs or over during the period of the test. The birds will be completely isolated or enclosed, special visiting days will be arranged, and duly announced. The feeding and welfare of the birds will be under the supervision of the secretary, U.P.P.A. A night watchman will be on duty throughout the competition to guard against any theft. The U.P. Poultry Association will appoint an expert manager for the test. All birds must be sent carriage paid to Lucknow, in properly-constructed crates, and forwarded with the official label, which will be sent to each competitor a full fourteen days prior to the date fixed for the reception of the birds. No bird must be sent until full instructions have been received from the Secretary, U.P. Poultry Association, or from Spratt's Patent, Limited.

This season in India has a perfect climate, and birds lay well.

English livestock is growing increasingly popular throughout India, and an entry in this competition gives British breeders opportunity to make their stock widely known in one of the largest markets of the world. British breeders who have forwarded birds to India for this test in each of the past five years have been thoroughly satisfied with the treatment received at the hands of the U.P. Poultry Association of India.

When birds are not required to be returned to England after the test, the U.P. Poultry Association arranges to sell them on behalf of their owners.

All arrangements for forwarding British birds, and for receiving entries from breeders in this country are in the hands of Spratt's Patent, Limited.

Breeders who wish to open business relations with India through this test are invited to apply at once to Spratt's Patent, Limited, Shipping Department, 24/5, Fenchurch Street, London, E.C.3, for leaflet giving fullest details

Correspondence—Continued

ROUP.

Dear Mr. Newman,—You have on several occasions in your recent issues asked that poultry farmers should give any experience that they have had of "Roup," so, following Mr. Toovey's excellent example, I have pleasure in stating mine :—

In June, last year, one of my laying houses, holding about 250 White Leghorn hens, was affected with Diphtheric Roup. The birds began dying, and I lost twenty-two in all. Getting nervous I wrote to you on the subject, and on your recommendation got into touch with Mr. Albert H. Brain, who promptly visited my farm, and in a couple of days took the matter in hand and treated them by his method.

After Mr. Brain's first visit no further deaths occurred, and the disease was completely cured in a fortnight.

The effect of his treatment was to at once reduce egg output in the treated house to about 25 per cent. of what it had been, but in three weeks the birds were again in full lay, and, indeed, were laying better than ever.

I have every confidence in Mr. Brain's remedy, and feel certain I shall be able to deal successfully with any outbreak that may occur in the future, although if the precautionary measures Mr. Brain recommends are taken I should imagine such an outbreak unlikely.

Yours truly,
JOHN S. NAPIER.

Re CO-OPERATION.

Sir,—Co-operative Poultry Products do not handle my stuff. They could not offer me the price I already realise. I therefore do not have, as far as sales are concerned, any interest in them. As a producer, however, they cause me great disappointment. They do not appear to aim at marketing anything approaching a Grade A egg, and I fail to see how their eggs will be in any way superior to the article collected and marketed by the "higgler." Where will they do the industry any good?

As for table birds, they are reverting to auction sales. Of course, it is most gratifying to think that there will be a purely poultry and egg auction mart run by poultry farmers, but do they imagine that the dealers attending will not form rings as in any other auction mart? How much of the profit possible will go to satisfy their unnecessary introduction of another middleman? Do they imagine buyers from all parts will attend when the figure given for their two months' output of table birds is only 20,000? What will happen to the birds which, sent by members, are considered by the society unsuitable for purchase by the said society at an auction run by the society itself?

If the society buys at the auction, it is paying auctioneer to sell its members' produce to itself. here is the advantage of membership?

If it does not buy, again where is this advantage? ill a member whose birds are not bought by the ciety share the profits made by the society on e birds it does buy? If so, do members supply-g first-class stuff subsidise members who produce ferior quality goods?

Briefly, does it not amount to this? Become a ember, send your birds to the society's auction; the society buys your birds you may get a price little higher than the dealers would give you, ss, I presume, the auctioneer's fees.

If the society does not buy, the dealers have it eir own way as in any other auction. Where is e inducement? Where is the advantage of Co-eration?

Is not this merely another lamentable instance a Co-operative Society failing to function in its ost important sphere by letting other people in take the profits of efficient marketing? What s will mean to the member selling his produce ough the society appears to me to be, in the rds of the chairman of the society, "Self-dent." I am, Sir, yours, etc., F. G. SWAN.

NORTHERN UTILITY POULTRY SOCIETY'S LAYING COMPETITION.

Ninth Report—June 13th to July 10th, 1925.

eautiful summer weather has prevailed during this period, we have had the longest spell of dry weather since the petitions of 1920-21. Most days the sun heat has been tem-d by a cool wind, so that no deaths from heat-stroke have e recorded, as was the case during the competition mentioned. advantage of altitude!

he health of the flock has been excellent, and although a birds are moulting it has not, as yet, become common. diness, on the other hand, has been general, all breeds being lved. Egg returns show a good average, the highest collec- being 374 on the 14th June, and the lowest 300 on July 10th. birds, White Leghorns (160 and 228) have topped the 200-mark, e White Leghorn 141 has laid 136 eggs on consecutive days, ly first-grade. 176 have been broody

DUCK SECTION.

ll these competitors are in good health, egg production again ng owing to quite a number falling into complete moult, the tanding pen for the month being Mr. Wilson Beattie's pen of i-Campbells, Pen 135, with 122 first-grade eggs.

res are Total Eggs for Month and Total to date respectively.

ection No. 1. Championship (Ten Birds).—Messrs. Longworth (W.L.), 146, 1385; Mrs. Crookes (W W.), 171, 1372; G. B. Met- (B.L.), 209, 1359; Mrs. Canning Roberts (W.L.), 177, 1348; J. npson, 214, 1515.

ection No. 2. White Leghorns.—Wm McMahon, 66, 721; Nor- F. E. Kimberley, 103, 706 James A. Rigby, 85, 697; Richard ley, 83, 609; E. J. Stone, 77, 591; Norval Swarbrick, 113, 646.

ection 3. White Wyandottes.—Robert P. Virtue, 81, 727; Mrs. Wilson, 58, 642; J. E Helm, 82, 730; Thomas Pinder, 70, 604; house, Beaumont, 77, 597; James Booth, 76, 588; James Hodg- 72, 611.

ection No. 4. Any Other Variety (Non-Sitting).—Mrs. J. H. (B L), 110, 623; Philip K. Berry (B.L.), 53, 510; Ernest Jackson), 86, 529; M. Flaherty (A.), 80, 455.

ection 5. Any Other Variety (Sitting).—Tom Gardner (R.I.R.), 73; J. M Thomas (R.I.R.), 64, 666; R. Duckworth (R.I.R.), 80, F and T. Lumb (R.I.R.), 58, 630; J. Ashworth (R I.R.), 72, 594.

ection No. 6. Two Birds.—Bolton and Gardner (R.I.R.), 32, Mrs. A. Stow (W L.), 34, 288; Henry Purves (W.L.), 28, 284; E. one (R.I.R.), 23, 260; T. H. Barker and Sons (B.R.), 38, 257.

ection No. 7. Single Bird.—Frank Heyworth (W.W.). 16, 173; Tallis (W.W.), 20, 172; E. J. Stone (W.L.), 23, 168; William ndson (R I.R.), 14, 152; E M. Saul (W.L.), 19, 158; H. Percy ron (W.W.), 21, 193.

ection No. 8. Small Breeders.—Wm. Machin (W.L.), 98, 789; Saul (W.L.). 74, 619; T. Lindley (W.L.), 107, 638; Eric Bernard e (R.I.R.), 76, 566; Robert Ingham (W.L.), 77, 469.

ection No. 9. Cross-breds.—Mrs. Clara Egar (B.M. x W W.), 1.

ection 10. Ducks.—Wilson Beattie (K.-C.), 122, 725; Maunder olson (K.-C.), 90, 656; Oscar C. Brown (K-C.), 109, 650; Chivers ons (K.-C.), 51, 544.

ection No. 11. One Duck.—Oscar C. Brown (K.-C.), 13, 168; r C. Marston (K.-C.), 25, 140; Mrs. E. M Kirkley (W.R.), 7, aptain P. C. Thompson (K.-C.), 13, 93.

AEROPLANES.

To the Editor of "Eggs."

Dear Sir, — Your correspondent, "P.C., N.U.P.S.," in "Eggs" of the 29th ult., writes on the subject of aeroplanes.

About a year ago I had considerable trouble of the same nature, though fortunately without experiencing any serious loss.

Knowing the aerodrome from which the offending machine came, I wrote to the commanding officer, pointing out the damage which might be done to poultry farms, and requesting that where the exigencies of the Service would permit instructions might be given to avoid flying low over poultry farms.

Since then I have had no further trouble, nor have I heard of any in the neighbourhood. Perhaps if "P.C., N.U.P.S." were to do the same the trouble would be overcome, as I am sure it is only due to the fact that the pilots do not realise that they are causing damage.

Yours faithfully,
G. E. LEWIN (Captain R.N.).

LAYING TESTS.

Dear Sir,—During the past two weeks I have received about half a dozen schedules from different Laying Tests, and, while every possible thing in the way of arrangement is cut and dry to the smallest detail, I can still see one item they all miss, and I think it is one that breeders would appreciate having attention; i.e., the time that will elapse from the end of a period until the issue of the report. To-day, August 12th, I have just received a report of my birds at a certain test for the period ending June 24th. The reports have got to go out—why cannot they always be issued in decent time?

Yours faithfully,
T. J. McMILLAN.

APPLICANTS FOR MEMBERSHIP.

Hoyle, C., Moss Fold P.F., Hurst, Ashton-under-Lyne.
Lomax, Andrew, 12, Henry Street, Church, Lancs.
Ford, E., 21, Rydal Grove, Basford, Nottingham.
Puzey, P. H., Bow House, Stanford-in-the-Vale, Berks.
Lynas, A. V., 16, Lansdowne Terrace, Wakefield.
Davies, Edward, The Gardens, Wilmar Cottage, Blackburn.
Mungo, Mrs J. R., 4, Invermark Terrace, Broughty Ferry, Barnhill, Dundee.
Carter, R. W., "Brooklyn," Mill Road, Wallhall, Hamilton, Scotland.
Brown, Wm. H., "Mangrove" P.F., 31, Crowlands, Romford, Essex.
Deancroft, P. F., Bledlow Ridge, West Wycombe, Bucks
Morris, Robert W., Little Slinfoldland, Five Oaks, near Horsham, Sussex.
Bellamy, J., Motor Yacht, "Spray," Coltishall, Norfolk.
Lessett, F B., Drayton P.F., Drayton, Cosham. Hants.
Taylor, G. P., Pig and Poultry Farm, Burrough-on-the-Hill. Melton Mowbray.
Frost, Wm., Chateau a l' Etoe, Alderney, Channel Isles.
Middleton, F., Lower Elms Farm, Burlescombe, Somerset.
Newton. W. T., Soderby Gard, Tungelsta, Stockholm, Sweden.
Mackay, Ronald G., Davaar, Brabourne Lees, near Ashford, Kent.
Blackwood, John, Park Farm, Victoria, Mon.
Hichens, Miss A., Trenuggo, St. Buryan, Cornwall.
Twigg, J., Laurel Bank P.F., Kilham, Lowthorpe, E. Yorks.
Rogers. A. W., 18, Uplands, Rogerstone, Newport, Mon.
Marshall, J., Woodside, Tacolneston, Norfolk.
Last, H. A., Wickham Skeith, Eye, Suffolk.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, AUGUST 14th, 1925.

GRAIN AND FEEDING STUFFS.—A few sales of British new crop wheat are reported at prices ranging from 11s. 1d. f.o.r. in the eastern counties to 12s. 3d. per cwt. f.o.r. in Kent. Samples of new home-grown oats are on offer at Bristol and London, but transactions are few, white varieties at London making from 9s. 8d. to 10s. 4d. and black varieties from 9s. to 10s. per cwt. British feeding barleys sells at recent rates, except at London, where prices have advanced from 10s. 3d. to 10s. 6d. per cwt.

Imported wheat is sparingly offered and with a fair demand is dearer, No. 1 Manitoba averaging 15s. 2d. per cwt. as against 14s. 7d. last week. Foreign feeding barley is in small supply and with a good demand is slightly dearer on the week, while imported oats generally meet a slow trade at about late rates. Maize is dearer and averages 11s. 3d. per cwt. as against 10s. 11d. in the previous week. Coarse middlings are in better demand and 5s. per ton dearer at all markets except London, while bran has advanced a similar amount at Bristol and London. Maize products have advanced in price, maize meal at an average of £12 4s. per ton being 7s. per ton dearer on the week. Oilcakes are in better request, and both linseed and cotton seed cake are dearer at London and Bristol.

MILLERS' OFFALS.—Bran (British): Bristol, £7 17s; Hull, £6 17s; Liverpool, £7 5s; London, £7 7s. Broad Bran: Hull, £7 17s; London, £8 15s. Middlings—Fine (Imported): London, £9 17s; Coarse (British): Bristol, £9 10s; Hull, £9; Liverpool, £8 10s; London, £8 7s. Pollards (Imported): Bristol, £7 17s; Hull, £7 10s; Liverpool, £7 7s; London, £7 10s. Rice Bran: Bristol, £7 17s, Liverpool, £7 7s. MEAL.—Barley Meal: Bristol, £12; Hull, £11 13s; London, £12 5s. Maize Meal: Bristol, £12 17s; Hull, £11 13s; Liverpool, £12; London, £12 5s. Maize Meal (S. African): Bristol, £11 5s; Hull, £9 15s; London, £10 5s. Maize Germ Meal: Bristol, £11 6s; Hull, £10 15s; London, £10 5s. Maize Gluten Feed: Bristol, £11 15s; London, £10. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 10s; London, £9 15s. Bean Meal: Bristol, £13 15s; Hull, £11 18s; London, £13. Fish Meal: Bristol, £20 10s; Hull, £20 10s; Liverpool, £20; London, £20 10s.

EGGS AND DEAD POULTRY.

Best British eggs and imported new laid are in light supply and are considerably dearer, while practically all other grades also show an advance. There is little of interest to report in the dead poultry market; prices for fowls have declined, but ducks are held for late rates.

Week-end Prices—Eggs (per 120): British, 18s 9d, 16s 6d; Irish, 17s 3d, 16s 0d; Danish, 18s 3d, 17s 3d; Dutch, 18s 9d, 17s 3d; French, 16s 6d, 15s 3d; Belgian, 17s 3d, 16s 3d; Italian, 16s 3d, 15s 3d; Lithuanian, 14s 0d, 13s 0d; Polish, 13s 0d, 12s 0d; Russian, 12s 9d, 11s 9d; Chinese, 13s 0d, 11s 6d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 9d, 1s 5d; Irish, 1s 4d; 1s 2d; Others, 1s 7d, 1s 3d. Ducks, 1s 4d, 1s 0d.

EGGS.

Per Doz.—Ashford. First, 2s 5½d; Second, 2s 4d. Birmingham: First, 1s 9½d; Second, 1s 9d. Bridgwater: First, 2s 1½d; Second, 1s 10d. Chelmsford: First, 2s 2½d; Second, 2s 0½d. Colchester: First, 2s 0½d; Second, 1s 9½d. Doncaster: First, 2s 0d, Second, 1s 10d. Dorchester: First, 2s 5d; Second, 2s 4d. Exeter: First, 2s 0d. Hereford: First, 1s 7d. King's Lynn: First, 1s 8d; Second, 1s 6d. Llandilo: First, 1s 9d. Mold: First, 2s 0d; Second, 1s 11d. Montgomery: First, 1s 9d, Newport (Mon.): First, 1s 10d; Second, 1s 9d. Norwich: First, 1s 10d. Oswestry: First, 1s 11d. Penzance: First, 1s 10d; Second, 1s 9d. Saffron Walden: First, 2s 1½d; Second, 1s 10¾d. St. Ives (Hunts): First, 1s 11d; Second, 1s 10d. Salisbury: First, 2s 2d; Second, 2s 1d. Skipton: First, 1s 9d. Truro: First, 1s 9d; Second, 1s 8d. Welshpool: First, 1s 10d; Second, 1s 7d. *Carlisle: First, 1s 11d. *Derby: First, 1s 11d. *Ipswich: First, 2s 0d; Second, 1s 6d. *Lincoln: First, 1s 9d. *Shrewsbury: First, 2s 0d; Second, 1s 11d. *York: First, 1s 11d; Second, 1s 10d.

FOWLS.

Per lb.—Birmingham: First, 1s 4d; Second, 9d. Doncaster: First, †4s 6d; Second, †4s 0d. Exeter: First, 1s 4d. Hereford: First, 1s 4d. Llandilo: First, 1s 10d; Second, 1s 8d. Newport (Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 5d; Second, 1s 4d. Welshpool: First, 1s 6d; Second, 1s 4d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 8d; Second, 1s 6d. *Lincoln: First, †5s 0d; Second, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: First, †5s 0d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 4d; Second, 1s 2d. Doncaster: First, †4s 6d; Second, †4s 0d. Exeter: First, 1s 3d. Hereford: First, 1s 3d. Llandilo: First, 1s 9d; Second, 1s 8d. Welshpool: First, 1s 4d; Second, 1s 0d. *Derby: First, †5s 0d; Second, †4s 0d. *York: First, †6s 0d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, August 19th, 1925.

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Contributions.—The Editor will always be pleased to cons contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existenc "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Bee Rudgwick, Sussex.

All communications with regard to Advertisements should addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe St London, S.E.16. Telephone: HOP 894.

Classified Advertisement Rates will be found at top of first of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it imperative that new advertisements and alterations are rece by FIRST POST ON FRIDAY MORNING to ensure insertion in following Wednesday's issue. It is hardly necessary to add the earlier in the week we receive copy the better it is for e one concerned.

PROOFS.

We cannot guarantee to submit proofs unless c plete copy is to hand by FIRST POST ON T MONDAY PREVIOUS TO THE FOLLOWI WEDNESDAY WEEK'S ISSUE.

KEIGHLEY AND DISTRICT BRANCH OF THE S.P.B.A.

The first ten positions for cups, etc, offered to membe Keighley and District Branch of the S.P.B.A. in Class C. in shire Federation International Laying Test, held at Otley a end of the tenth month was as follows:—

Section 9.—W. Wharton, Keighley (W.L.), 205 eggs; J. W. Brayshaw, Keighley (W.L.), 198; H. Hershaw, Keighley (163; S. Preston, Haworth (W.L.), 168; S. Hartley, Haworth (186; Wright and Fortune (Ex.L.), 183; B. Atkinson, Tho (Bf.L.), 187; W. Thomson, Glen Lea (B.L.), 184; J. Paget (W.L.) J Fisher, Cowling (Bk.L.), 166; F. Waddington (W.L.), 163.

Section 10.—H. Downsborough (W.W.). 216; A. Sawyer, hills (R.I.R.), 179; Mrs. Hawkesworth, Pool (W.W.), 184; J. Br Glasburn (R.I.R.), 166; H. Downsborough (W.W.), 187; Mrs. Barker, Culling (W.W.), 175; Tom Marks, Somerset (Lt.S.), Wright and Fortune, Keighley (W.W.), 148; Miss Taylor (W 166; E. Mawson, E Morton (R.I.R.), 169.

EG

Wednesday, August 26th, 1925.

EGGS

THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

egistered at the G.P.O. as a Newspaper.
ol. XII. No. 9. Copyright.

Edited by TOM NEWMAN.
Price TWOPENCE.

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EGGS

THE OFFICIAL ORGAN OF THE

Scientific Poultry Breeders' Association

WEDNESDAY, AUGUST 26th, 1925

Editorial.

THE HARPER-ADAMS' CONFERENCE.

As hinted in last week's issue, the discussion on the papers read at the Harper-Adams' Conference was insufficient to allow many of the points at issue to be thoroughly threshed out, therefore, with the permission of our readers, we propose to deal as far as possible with those which, in our opinion, were of the greatest interest and importance, in the hope that they may be induced to contribute their views.

SEX-LINKED INHERITANCE.

We will give Dr. Crew's definition, merely stating, by the way, that Mr. Michael Pease, Professor Punnett's colleague at Cambridge, in answer to a question by the Dr., expressed his agreement with the general thesis as enunciated by him.

DEFINITION: In their general transmission from generation o generation, from parent to offspring, certain heritable characters (details of structure and function) are clearly associated in an ntimate manner with the mechanism by which sex is deternined, and for this reason referred to as "sex-linked characters."

Discussion centred round the economic significance of sex-linkage rather than on its scientific aspect. Almost the first question asked was as to its value to the general farmer, the querist stating that he found considerable difficulty in answering it himself. If the farmer is running Light Sussex and selling the cockerels for table purposes, what advantage is it to him to use a cross-bred in order to be able to detect the sex at hatching? There were many attempts to answer the question, but to us it appeared that the real point was missed. The first advantage would be n the quicker development of the cross-bred stock, and the second, in the fact that the chicks could be separated at hatching, and the cockerels specially fed for table production, which should lead to their being not only ready for market at least a fortnight earlier, but in a better quality flesh.

One of the main points made by Dr. Crew was the higher fertility and the greater vigour of the cross-bred stock. We may here say that Dr. Crew did not pose as an advocate of cross-breds, but was simply "putting a case," his object being o induce those present to discuss the value of sex-linkage.

On the question of fertility we do not think there is very much reason to complain with the pure breeds, but it is rather on the point of hatchability and vigour that our arguments should be based. This week we visited a well-known commercial egg farm, and were shown figures giving the results from a 3,600 Mammoth incubator; 94 per cent of fertile eggs were hatched in one case and 82 per cent. in another, and over 2,000 of these had travelled from the West of England. The fertility was very high throughout—the breed, White Leghorns.

We maintain, as we always have maintained, that if breeding and selection are right, the pure-bred can hold its own with any cross both as regards vigour, hatchability of the eggs, and rearability of the chicks. We do not yet think that a good case has been made out for sex-linkage, except in so far that it would be very helpful to the backyarder and small poultry-keeper, who could buy day-old pullet chicks.

If we come to the question of the commercial egg farmer, has it been demonstrated that it is economical to destroy the cockerels of the light breeds at hatching?

In the majority of cases he can detect the sex at three weeks or a month old, and even if he only obtained 6d. each for them this would be a better proposition than killing them on hatching.

We now have to look at it in another light. The crossing of the heavy and light breeds for egg production and table purposes. Here, again, it is difficult to see the advantage of the sex-linked cross, for a Leghorn and Wyandotte would not make such a good table bird as the Wyandotte pure, while the crossing of two heavy breeds, such as the R.I. Red and Wyandotte, certainly results in increased broodiness, and we have reason to believe a lower production than when these breeds are bred pure.

Dr. Crew urged the advantage of crossing within the breed in order to secure uniformity, and instanced the Red and Light Sussex. This was sound advice so far, but such a cross, until the Red Sussex has been bred for egg production, would only result in a lower production in the progeny.

We found, in conversation with many of those present at the Conference, that they were beginning to get dubious as to the economic value of the sex-linked crosses.

We leave it at that for the present in the hope that our readers will put forward their arguments in favour of sex-linkage.

IN-SHELL MORTALITY

On the Tuesday morning we had an excellent paper from Professor Willard Thompson, which was listened to with close attention.

There is one quotation in his paper which is of the first importance, and which we repeat here:—

> "Pearl, Lamson, Card, Dunn, and others have stated that all eggs are not equally hatchable because they are produced by mothers which are unequal in their ability to produce hatchable eggs."

Professor Thompson goes on to state :—

> "This would indicate that probably hatchability is inherited."

Writing in "Eggs" on June 18th, 1919, we stated :—

> "Many breeders are not aware that hatchability is an inherited character. Those who possess the knowledge, in the main, fail to recognise its economic value. . . . We have hens which lay a very large percentage of unhatchable eggs which are a distinct menace to the economic value of the flock, as they will transmit these undesirable characters to their progeny."

Professor Thompson stated that Dunn had asked and answered four questions. We are here referring to the third of these :—

> "Are the differences (in hatchability) due to differences in egg production of the mothers?"

Dunn answered this question by stating that he found no correlation between egg production and hatchability. With this statement we are in full agreement, for we have collected evidence during the past few years which indicates that the eggs of the high producer are not less hatchable than those of the low producer. Figures have shown that a comparatively large number of low producers are poor hatchers, while we have evidence that some of the highest producers give the maximum hatchability.

We must realise that it is purely a matter of the individual, and the actual production does not affect hatchability. The pedigree breeder should select for high hatchability just as he should select for high fecundity.

One point which was of extreme interest and importance, and for which no explanation has so far been offered, is the abnormal position of such a high percentage of chicks in the shell, and it is particularly interesting to note that Sanctuary, in his study of unhatched chicks from pedigree eggs of a strain of R.I. Reds, which had been selected each year for high hatchability tendency found they gave some indication that the percentage of abnormal embryos was slowly, although continually, reduced by that selection process. He does not endorse a suggestion which has frequently been made that the position of the embryo within the shell may be influenced by the manipulation or handling of the eggs during the period of incubation. Is it possible that this position is very often influenced **previous** to incubation and not **during it**?

One point on which Professor Thompson failed to remark is the texture of the shell. During the examination of over 4,000 eggs during the past two seasons we have found quite a high percentage of poor hatchability due to the exceeding thickness of the shell. This occurred in most cases with the eggs of the general-purpose breeds, particularly R.I. Reds and Barnevelders. It was not so often apparent with the Wyandotte, Rocks, or the light breeds.

(To be Continued.)

(Continued at Foot of Next Column).

Practical Ration Making

Principles and Practices.

By **WILLARD C. THOMPSON. B.Sc.,**
Director, National Institute of Poultry Husbandry.

(Continued from Page 124.)

(1) The grains to be used in the scratch grain ration must be selected with due regard to their nutritive content, to their usefulness to the fowls, to their cost and availability.

(2) Generally speaking, the nutritive ratio of the scratch grain ration should be rather wide, that is, the proportion of carbohydrates and fats taken together, to proteins, should be relatively high. In the rations which I have used I have found that a nutritive ration of 1 to 7, or 7.5 is approximately the most satisfactory.

(3) The grains used should be easily available, and not exorbitant in cost.

(4) The proportions of each grain used, other things being equal, should be simple in order to facilitate the home mixing of the scratch grain ration by the average poultry-feeder.

(5) The scratch grain ration should be fed in such a manner as to keep the fowls in the desired condition. It has been my experience that this is a matter of. first, the proper distribution of the feeding of the scratch grain ration through the day; and, secondly, the proper amount of scratch grain ration allowed during the various months or seasons of the year. In elaboration of the first point I would suggest that under average conditions maximum results can be obtained by dividing the daily scratch grain ration into three feedings, the first, consisting of approximately quarter of the daily allowance, fed at breakfast time; the second feeding, consisting of another quarter of the daily allowance, fed at noon; and the third feeding consisting of half the daily allowance, fed within the hour before the fowls retire to the perches. The dis-

ibution of the daily grain ration has the advantages of timulating exercise among the fowls in the early orning hours, and finally filling their crops just efore night comes on, leaving them to digest the heavy vening meal while on the perches and inactive. Re-arding the second point—that is, the total amounts f scratch grain rations allowed laying hens during arious months—I would give for your consideration he results of experiments conducted on a very large umber of commercial egg farms over several years. study of results gives us the recommendation that, ther things being equal, the average laying flock hould be fed twelve pounds of scratch grain ration per undred fowls per day during the months from ovember to April inclusive, and ten pounds daily per ne hundred fowls during the remaining months, with he possible exception of September, during which onth a drop to 8½lbs. is usually justifiable. No hard nd fast rule can be laid down successfully as to the mount of scratch grain ration to allow, as this must be overned by the condition of the hens.

(6) The scratch grain ration, consisting of equal parts f cracked maize, wheat, and oats, in my experience as proven of economical value Using the digestible utrient table of Kaupp and Ivey, the nutritive ratio f this scratch grain ration is 1: 7.3.

The second part of the feeding programme for lay-ng hens consists of the mash ration, which is a com-ination of ground grains, or milled by-products. The ash ration is counted by the practical poultry-feeder s being primarily the part of the ration which forces gg production. This essential purpose of the mash ation should guide the poultry-feeder in compounding t. I do not wish at this time, because time will not llow, to enter into a discussion of the relative fficiencies of wet and dry mashes, but I must for the urposes of carrying out my illustration tell you that, n combination with the scratch grain ration sugges-ed above, a dry mash accessible to the laying stock t all times has been used. There are a few points onnected with this dry mash which I would lay efore you

(1) The simpler the combination, the easier the task f the poultry-feeder, who mixes his mash ration at ome, and by so doing usually secures a cheaper mash. he ration which I have used, and have seen used hrough several years, consists of equal parts by weight f wheat, bran, sharps, maize meal, ground oats, and eat meal.

(2) I believe that it is usually conceded by poultry-eeders that the nutritive ration of the dry mash hould be, as compared with the nutritive ratio of the cratch grain ration, very narrow. The nutritive ration or the ratio given above is approximately 1: 2.75, epending upon the quality of meat meal used.

(3) Under average conditions, and in consideration of esults obtained, this simple dry mash mixture has orked out to be one of the most economical and heapest dry mash mixtures tried. There are two ays of looking at the cost of the mash ration; one iew point is to consider it as a mash capable of pro-ucing eggs, and; therefore, earning a certain amount er pound.

(4) I believe that this dry mash mixture, which contains approximately 92½lbs. digestible proteins, 167lbs. digestible carbohydrates, and 20½lbs. digestible fats, in every 500lbs. of mixture, offers a sort of standard as to nutrient content required for laying hens. Any mixture of available food materials which will furnish approximately these amounts and proportions of digestible nutrients should be efficient for the purpose, and if certain other combinations than those suggested here can be made locally without widely interfering with this balance at a more economical cost, there is no reason why changes to such a basic mash should not be made.

It is keenly important that we should not depart very far from these suggested rules as to amounts of scratch grain ration to allow, and as to the availability of dry mash, but experience has suggested to me that when using these rations, especially for winter egg production, there should be maintained a certain relationship between the amounts of scratch grain rations consumed and amounts of mash consumed. Usually it is to be recommended that the daily amount of dry mash consumed should be approximately equal to the daily amount of scratch grain consumed. The poultryman can do this by varying his grain ration according to mash consumption. If, however, by doing that he notices that he is lowering his daily grain consumption materially beyond the amounts suggested above, it is necessary that he should give serious attention to ways and means of forcing an increased consumption by his fowls. This is particularly important and necessary during early winter days when the fowls are just coming into lay. May I suggest that the usual ways and means that I have found to be effective in building up a heavier mash consumption, are to increase the hopper space, to keep the birds closely confined, and, therefore, near the hoppers, to some times offer an additional moist mash during the noon hour, and under exceptional circumstances to even include a tonic in such moist mash for a short period to stimulate the appetites of the fowls. The essential point is to raise the mash consumption to a figure that will compare with the grain consumption

In building either of these first two cites of the daily rations for laying fowls, the poultryman should be guided by the content of digestible nutrients in the feeds which he proposes to use. A foodstuff is wasted even if cheap unless the fowl is able to digest the nutrients contained. For many years we have been working out our poultry rations by acceptance of the digestible nutrient tables, which have been given to us by such scientific workers as Wolff, Leiham, and Armsby, because they have been the best information that we have had concerning digestibility of foodstuffs, but those digestibility tables were worked out with cattle, horses, sheep and swine. It is not necessarily true that because a cow can digest a certain percentage of the nutrients in a foodstuff that a hen will digest and use the same nutrients in that same foodstuff. Just recently we have been given a report from the North Carolina Agricultural Experiment Station, which is called Technical Bulletin No. 22, on the subject of "Digestive Coefficients of Poultry Feeds and

Rapidity of Digestion," by Kaupp and Ivey. This bulletin is valuable, not only because it gives the results of their important work, but it summarises all work that has been done by scientists to date, concerning the digestibility of the various nutrients in ordinary foodstuffs by poultry. I could detain you for a very long period by going into a discussion of important points brought out by the investigations of these two men, but I will point to only two as indicative of the fact that our conception of the real value to some of the ordinary foodstuffs to poultry feeding may be somewhat altered by an exact knowledge of their digestibility by fowls. As a first example they find that sharps is at the foot of the list in total digestible nutrients per 100lbs. As a second example we find that they suggest that wheat bran is very low in digestibility, so far as poultry is concerned.

I would suggest that any of you who may be particularly interested in studying out poultry rations from the standpoint of obtaining a maximum quantity of digestible nutrients at lowest possible costs might obtain this bulletin with very great good.

We must not forget that food passes through the system of the laying hen in a remarkably short period, and that chiefly for this reason the hen is incapable of digesting any appreciable amount of fibre. Our hens are best fed when the ration is low in fibre content.

The third part of the ration for laying fowls consists of what we might term supplementary foodstuffs. In this list I would roughly include some sort of green succulent feed, than which there is no better than sprouted oats, grit, oyster shell, possibly mineral mixtures, and possibly milk. It is the primary course of these supplementary foods to furnish vitamin minerals and other food elements that may be as yet but little understood, shell-forming material, and mechanical devices for the grinding of food in the gizzard, as well as tonic to the appetite. Because Captain Halnan has so clearly discussed the mineral and vitamin requirements of fowls I shall leave this point by just pointing out that these supplementary foods are vitally essential to a complete ration.

The fourth and last part of the ration is a simple one, consisting solely and entirely of water, but my observation has taught me that sometimes poultrymen do forget that in order to make the rest of the ration useful and usable the fowls must have a constant supply of fresh clean water.

In the short time allotted to me I fear that my discussion of practical ration making may be quite inadequate, but I leave whatever there might be of suggestion in this paper with you for consideration. As I said at the beginning, we must put together a mixture of grains and ground products in such a manner as to secure a maximum of eggs with a minimum of expenditure, while at the same time maintaining our fowls in health and condition. The suggestions in this paper are offered merely as a basis for the solving of the ration problem in any one of your respective communities. Given the list of available foodstuffs and their costs, one can and should secure the figures which indicate digestible nutrients contained, and thereafter be able to put together a practical ration that will accomplish the objective in mind.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

CATCHING A FOX.

Miss Greville, of Addlestone, has had the followin interesting experience with a fox. She writes a under:—

"We think you will be interested to hear of our experience wit a fox. In two raids this fox killed 19 of our best 1924 birds trap-nested for the future breeding stock, so we moved the res of the birds and houses with wooden floors, shutting them in a night. Last Sunday morning, when we went to feed, one bir did not come off the trap-nest, and on looking in ther appeared to be not only a feathered inmate but a furry one. Th trap was propmtly dropped. After placing a wire firmly in fron we again lifted the trap, and saw a dead hen and a fox! Th hen was a broody one, and had entered the nest without drop ping the trap, and so had not been noticed, and the fox had gon in after her, and was trapped—a novel use for trap-nests. I was certainly a case of 'the Biter bit.'"

FOOD PURCHASE SCHEME.

Our members are now beginning to "take hold" o the scheme, and I am pleased to say we are receivin numerous letters testifying of the excellent quality o the foods supplied

The mashes are giving the greatest satisfaction. Th following is an extract from a letter received from Mr J. Deakin:—

"I wish here to say that this mash—particularly the last— very good, and giving excellent results. But what is quite a important it is saving me my sub. to S.P.B.A. over and ove again"

Mr. W. J. Dray, The Nurseries, Ramsgate, asks u to mention that he is having feeding stuffs now, an would be pleased to hear from anyone else who woul care to join him.

RATS.

A member in Switzerland writes as under:—

"Dear Mr. Newman.—I send you the following extract (tran lated) from a Swiss agricultural paper in connection with th destruction of rats I have not tried it, as I do not suffer fro the depredations of that rodent; therefore, I cannot guarant the efficacy of the procedure recommended. For all I know yo may have known the suggested methods since you were in yo cradle:—

> 'Divide walnuts, carefully retaining the contents in the shells, boil them for twenty minutes in wood ashes, the dry. Rats will eat them readily. Lay them about the plac After a few days the mortality among these rodents will very noticeable.'"

BLINDNESS.

Our old friend, Mr. P. L. Johnson, has written m in reference to my comments on blindness in las week's issue He says:—

"Dear Mr Newman,—Noticing your note on Blindness so few days ago, I have had quite an epidemic of this both in youn

> icks and adult fowls. After a lot of trouble it was traced to sing barley straw for litter, small particles of the 'husk' getting to the eyes, and causing inflammation. When the litter was anged there was no more trouble."

I do not think this applies to the particular cases to hich I have referred. It seems to me to be an herited trouble, and we would like to get some more formation on the subject.

As a curious treatment for blindness, I may mention letter received this morning, in which the writer ates that one of his hens has gone blind in one eye, d he has given her castor oil for a week, with no fect. Any information on this subject of blindness ill be gratefully received.

Please do not attribute it in this case to any eficiencies in the diet, as I have reason to be connced that it is not due to dietetic causes.

Since writing the above I have received a letter from essrs. Buchanan and Prentis, which is particularly teresting, as the trouble here was apparently etetic. Mr. Buchanan writes:—

> "We had an outbreak of this early this year and probably or 16 Leghorn pullets affected. The only possible cause we uld put it down to was feeding bolted and sprouted swedes. e usually 'hole' the swedes, but this open winter we left em in the ground, and the very mild weather in January used them to sprout and become 'gasey.' In this state they e, of course, dangerous to stock, and an old shepherd told me had known sheep go blind after eating them. I sent a bird Major Saunders and attach his report. I took this particular d off the perch one morning—a fine pullet in full lay, and as nd as a bat—from which it appears that the attack is dden, as she could see to get to perch overnight."

Major Saunders' report was as follows:—

> "The bird arrived alive quite safely, and I am keeping for a y or so to see the effect of treatment. The case appears to be intoxication of the brain, rather than actual disease of the es themselves, and this I should judge has been caused by isonous matters evolved in the gassy swedes. It is well known at roots in this condition elaborate substances that may be isonous to stock, but the exact nature of the toxins have not yet en definiely identified. I should, at all events, discontinue ding these swedes I should advise 20 grains of glauber salts r head as a purge to help to clear away the toxic matters m the system."

Writing three weeks later Major Saunders reports:—

> "The report on the first live bird has been delayed, because thought it better to keep her under observation, and try the ect of treatment. As far as general health was concerned, was quite normal, but gradually went totally blind. The st-mortem showed her to be in good condition, and just about lay. The eyes were in a glaucomatous condition, i.e., dened, and with increased inter-ocular pressure. This I can y think could have been brought about by swedes, especially she was one of many to suffer from the same eye condition."

This is very interesting and also of importance, as doubt whether many of our readers had ever suscted the feeding of sprouted swedes would cause ndness.

SCOTTISH EGG-LAYING TEST.

The report of the tenth period is to hand, and ention is made of the fact that warm and dry ather prevailed. The birds were in a healthy ndition, but moulting was very prevalent.

Egg production for the month average 16.48 per d, as compared with 17.52 in the previous nth.

The average per bird since the beginning of the test is 159.65.

Ducks moulted heavily, and there was a great drop in the number of eggs in this section.

One is a little surprised to find such a high percentage of eggs laid during this period in the White Leghorn section are still second grade. The total number laid was 3,426, and of these only 2,083 were first grade, and 1,221 second grade (under two ounces). Matters were no better in the Wyandotte section, where of 759 eggs laid 337 were second grade.

As far as production is concerned, the White Leghorns have certainly done well, with an average per bird of 173 eggs, and Mr. Baxter's leading pen is an exceptionally good one, with a record of 1,140 eggs, only 149 of which were second grade.

Mr. J. Prentice, who secured the S.P.B.A. Cup for the best winter production, has done almost equally as well.

The contrast between Mr. Baxter's pen and that of one or two others in the section is rather remarkable. For example, No. 29 has laid 1,164 eggs, yet only scores 549 points as against Mr. Baxter's 1,108. Of the former pen not less than 698 are second grade.

We cannot help regretting that such a high percentage of second grade eggs are laid by the White Leghorn, and we feel it is a matter to which breeders should give their close attention.

IRON HOUSES.

The above photograph has been received from Capt. C. J. Copper, who writes as follows:—

> "There has been a certain amount of discussion in 'Eggs" on iron houses, and I thought that perhaps readers of your very valuable paper might be interested in my latest house, of which, if successful, I propose to build many. Should you feel disposed to reprint this photograph I shall be delighted, as I should very much like to have readers' opinions and suggestions on same. The structure is No. 12 gauge, steel (circular) sheets, bolted together on sleeper floors, the bottom of the sheet resting on a sleeper on edge to give extra height. Size of house 17ft. x 8ft. x 8ft. 6in. high. Wooden frames back and front. Plenty of glass in front, and three 2ft. 6in. x 1ft. 6in. floor lights at rear underneath the dropping boards. Eight trap-nests, 2ft. 0in. high along one side, dry feeder on platform on the opposite side.

"Before deciding on this house I knew of two real 'snags,' viz., the interior would be like an oven in summer and very cold in winter. I have overcome the heat difficulty by thatching with bracken to a depth of six inches. The house is now a perfect temperature. As regard ventilation, I have a louvre window in the top of the back section and also open ventilation at the front. The house, being circular, it seems that all foul air must rise to the top of the house where there is always a moving current of fresh air.

"My reason for adopting this house was that I have a number of them surplus owing to two years of not very remunerative pig breeding.

"I have at present 30 February hatched Wyandottes in the house. As I stated before, I should like to hear of any members who have suggestions to offer, or anybody who has had experience with them in winter."

GLOUCESTERSHIRE EGG-LAYING TEST.

Report on Gloucestershire laying test (under the supervision of Mr. L. G. Price, County Instructor in Poultry Keeping), for the tenth month ended 17th July, 1925.

During the past month 4,850 eggs have been collected, against 5,245 the previous month, giving a total of 49,383 for the ten months, and an average of 154.8 in respect of the 319 pullets entered. Some birds are showing signs of moult· the general health of the flocks is good.

From and including this month Grade A. eggs count 5, and Grade B eggs count 3 points respectively.

Early application is advised for next season's test. Particulars and entry forms may be obtained from the Hon. Secretary. Entries close August 31st.

Figures are Total Points to date.

Section A (1). White Wyandotte (Professional). (Five birds constitute a pen).—H Ludlow Hewitt, 3752; P. M. Hinton, 3712; E. J. Stone, 3627; H. Bennett, 3623; J. E. Boyd, 3538; H. W. Fowles, 3449.

Section A. (2). A.O.V. Heavy Breed (Professional).—Miss M. Lawrence (R.I.R.), 3720; J. G. Herbert (R.I.R.), 3665; G. H. H. Simmons (L.S.), 3552; M. C. Beale (R.I.R.), 3400; C. J. Young (R.I.R.), 3393; W. R. Partridge (R.I.R.), 3374.

Section A. (3). A.V. Light Breed (Professional).—Miss N. Townsend, 4119; Miss H. Baylis, 4075; Sherborne Park P.F., 3936; G. B Young, 3737; Cotswold Pedigree P F., 3724; G. H. H. Simmons, 3714. All White Leghorns.

Section B. (1). A.V. Heavy Breed. (Confined to owners of not more than 50 laying head).—Miss M. Brown (W.W.), 3753; Maisemore School (W.W.), 3735. A. W. Moses (L.S.), 3616; L. Grist (W.W.), 3387; R .T. Miles (B'Veld), 1766.

Section B. (2). A.V. Light Breed. (Confined to owners of not more than 50 laying head)—L. Grist, 3722; C. E. Skirten, 3670; Miss M. Brown, 3267; J. D. Crewdson, 3246. All White Leghorns.

Pen Duck Section.—G. H .H. Simmons (K.C.), 672; G. B. Young (K.C.), 648; Major J. G. Dugdale (K.C.), 593; S. J. Phillips (K.C.), 591; Sherborne Park P.F. (K.C.). 523; W. R. Partridge (W.R.), 498.

SINGLE PEN SECTION.

Section 1. White Leghorns.—L. Grist (13), 915; Miss N Townsend (5). 908; G. H. H. Simmons, 878; J. L. Brown, 870; H. W. Stephens, 863; Miss N. Townsend (19), 842.

Section 2. White Wyandotte.—H. W Fowles, 966; W. R. Partridge (34). 899; Lord Sherborne (37), 862; W. R. Partridge (38), 826; Lord Sherborne (39), 804; G. H. H. Simmons (31), 783.

Section 3. Rhode Island Red.—Miss M. Lawrence (59), 909; G. B. Metcalfe, 743; Miss M Lawrence (42), 674; S. Barnes, jun. (48). 646; W. R. Partridge, 620; A. Daunton, 482.

Section 4. A.O.V. Light Breed.—Churchdown P.F. (Ancona), 835; H. W Stephens (B.L.), 701; G. B. Young (B.L.), 640; Churchdown P.F. (B.L.), 597. Major J. G. Dugdale (B.L.), 592; Miss M. Johnson (W. la B.), 573.

Section 5. A.O.V. Heavy Breed.—Miss M. Lawrence (Bf.R.), 803; G. H H. Simmons (Bf.R.), 781; Mrs. E.Weinholt (Aus. Orp.), 733; W. R. Partridge (B'Veld), 716; Lady Bledisloe (Aus. Orp.), 701; Major J G. Dugdale (58) (L.S.), 651.

Section 6. Ducks.—Mrs. H. L. Hanks (K.C.), 260; H. W. Fowles (K.C.), 232; Mrs. W. Pearce Ellis (K.C.), 189; F. L. Walters (7) (W.R.), 177; W. R. Partridge (15) (W.R.), 164; Miss N. Townsend (12) (K.C.), 163

H. S. WRIGHT, Hon. Sec.,
Shire Hall, Gloucester.

LEICESTERSHIRE COUNTY COUNCIL EDUCATION COMMITTEE.

EGG-LAYING TRIALS.

The new Laying Trials, under the auspices of the above, and open to all poultry-keepers in the county, will be held at the Midland Agricultural and Dairy College, Sutton Bonington, near Loughborough. The trials will commence on or about the 15th October, and will run for 48 weeks. There will be sections for pens of six birds, and also sections for the smaller breeders. The entrance fee will be 7s. 6d. per bird, and the closing date for entries will be September 15th. Full particulars can be obtained from Mr. H T. Atkinson, County Instructor, 6, St. Martin's, Leicester

H. T. ATKINSON, County Poultry Instructor.

Utility Duck Club Notes.

By **HUGH B. CARRINGTON.**

Let me apologise first of all for having failed t write these notes lately, but the failure is, I think almost excusable. Floating the Duck Egg Cam paign, taking a holiday, and recovering fro both, are fairly good reasons for the omission

With regard to the campaign, all U.D.C. mem bers will, it is hoped, have received their packet of posters long ago. Many have written and ver kindly sent along subscriptions to help forward th movement. Needless to add, it is a very expensiv business, and if ALL Duck Egg producers wi only realise that what is being done is done i THEIR OWN INTEREST, and will contribut accordingly, it will be of immense help. Withou the necessary sinews of war progress is hindere A young but vigorous and growing industry shoul easily be able to put up the necessary sum, i.e anything upwards of £200, for a cause which absolutely vital to its future·

To turn to the effects which have, so far, bee reported as the result of the display of the Duc Egg Poster. One member writes to say that f the first time for two years it has been possib to get the same price for duck eggs as for he eggs, previously it had always been lower. Sever others write that they have obtained increase prices, and a good many to say that the deman is exceeding the supply. So far so good, but it not good enough. Such reports need to universal, and it is only by constantly peggin away at the campaign, by continual perseveran and push, that the duck egg will come into i own throughout the country. No good cause w ever won without a fight, the enemies in this fig are the foreign egg, public prejudice, and t people who do not trouble to market their eg properly. The first of these enemies contribut to the second, for many foreign duck eggs a neither good to look at nor good to taste ; t counter to both these enemies is the reduction the numbers of the careless producer by the i crease in the number of those who market th eggs well.

A leaflet is published by the U.D.C., as part the campaign, on proper methods of marketin and if anyone who has any doubt on the subje will read this leaflet, it may perhaps help them be more successful in disposing of their produ and thereby not only helping themselves, but oth duck-keepers as well.

My meaning is that a convert to duck eg made in one part of the country will often le to other converts in other parts of the count till gradually the demand becomes general.

Now for a practical hint. As all duck-keepe know, ducks after their summer moult come rapi into lay again, and given proper management w lay some very long sequences of eggs through the autumn and winter. At this time, when ducks are in full production, there is often a comparative scarcity of other eggs. It is therefore obviously a time for making a push, and the U.D.C. poster should be displayed on every possible occasion. Retailers should be urged to show it in their shops, and persuade their customers to try duck eggs while private customers should be prevailed upon to take duck eggs in lieu of the unobtainable hen egg. The duck egg habit will then be contracted, once it is contracted there is every probability that it will stick.

It is a little late, perhaps, to talk about the moult, but a few words may possibly be helpful. I have had various enquiries about what foods to give the birds when this comes on, should they be given linseed, should they or should they not have fish meal, and so on. My own opinion is that it is waste of money to give linseed, and that a bird which cannot moult properly without this expensive assistance is not worth bothering about. Also, I do not believe in any drastic change of diet—in fact, I make practically no change. Some time before the moult is likely to come on the maize or maize products in the ration have already been considerably increased, but that is all.

This year I have had a good many reports of early moulting. These were quite expected, for the exceedingly hot weather we had in June and early in July was almost sure to bring it about. In this connection my own experience may be of interest. Largely on purpose, though in a measure on account of lack of labour, the grass, and, I am sorry to say, weeds in my duck pens were allowed to grow exceedingly long. The results were all that could be desired from an egg point of view, for the birds had plenty of shade, and consequently the moult was considerably delayed; in fact, though it is now the second week in August, and there is a heavy drop in production, one or two pens are still laying possibles or nearly possibles daily.

The whole moulting problem is exceedingly interesting, and would well repay the most careful study, for the advantage of a controlled moult will be apparent to everyone. For example, if the moult can be delayed till the middle of August instead of taking place in the middle of June, as is frequently the case, it should be possible to bring the August moulters on to lay towards the end of September, and keep them laying right through November, when eggs are at their highest price, whereas the June moulters will very likely have ceased to lay, having already produced their autumn batch by the time November comes round. That such a delayed moult is possible I am almost convinced, the means to it being, first, good stock, then feeding with a view to preventing too rapid exhaustion of the body fat, and lastly, shade, which will prevent the parching of the skin and roots of the feathers.

These theories are the result of practical experiments, at present insufficiently protracted to allow absolutely definite conclusions to be drawn, and I should therefore be grateful if my readers, who have had interesting experiences of this kind, would write me about them. Really definite knowledge on the subject would be most valuable to all duck-keepers.

This autumn I hope many more duck-keepers will go in for recording their birds. Apart from the fact that it makes duck-keeping much more interesting, it is quite invaluable when selecting breeders for the following season to know not merely the number of eggs a bird has laid during its pullet year, but the quality of those eggs throughout the season makes the extra expense and trouble well worth while. Personally no haphazard method of selection would ever content me now, and once trap-nesting has been practised it is rare that it is given up.

Any new members joining now will be entitled to all the privileges of membership till September 30th, 1926, literature published by the club previous to that date may be obtained by them at specially low rates. To anyone starting duck-keeping the leaflets and Year Books for 1924 and 1925 will be found full of valuable information and instruction. Unfortunately, my experience is that many people delay joining the U.D.C. till they have suffered disaster or disappointment with their birds, both of which could have been saved them had the knowledge, which it is the object of the U.D.C. to spread, been obtained, or the advice, which is always readily given, been sought.

YORKSHIRE FEDERATION OF POULTRY SOCIETIES' INTERNATIONAL LAYING TEST.

Report for the Tenth Month—June 27th to July 24th, 1925.

The close of the tenth month is making the interest in the results of the Test become very keen, especially as in several cases they are very close. The White Leghorns hold the first three positions in the whole Test, though there is no certainty of their keeping it. Pen 96 (Mrs. Clay) is still first for the "Daily Dispatch" Gold Cup, but Pen 10 (R. H. Fryers) has had to yield second place to Pen 19 (R. Rodwell), which pen is also in position for the Silver Cup for the second pen if the White Leghorns win the Gold Cup. Birds No 559 and 376 are struggling hard for the "Miss Delaney" Best Individual Bird Cup, and Bird 376 (M. A. Hindmarsh) is one egg in front of Bird 559 (Mrs. Clay). Pen 1 (Allen Bros.) is the highest for the month with 122 eggs, a very good average of 24.4 eggs per bird, while Bird 261 (Leslie Williams) is the only one to lay 28 eggs.

The heat and dry weather have forced many birds into the moult, especially the heavy breeds, a large number of which have left the broody coops and gone into the moult. The health of the birds is normal. Egg production is slightly on the decline, the average per bird for the month being 16.7.

Every competitor will have received the 1925-26 Schedules and Entry Form, and it is hoped they will send in their entries as early as possible. Further copies can be had on application to the Hon Secretary, Mrs. Vowles, Beningbrough, York.

The leading pens to date, with Eggs and Points respectively, are as follows:—

Class A. Section 1. White Leghorns.—Mrs. Clay, Long Preston, 958, 969; R. Rodwell, Nelson, 970, 1048; R. H. Fryers, Bradley, Keighley, 933, 945.

Class A. Section 2. Black Leghorns.—R. Rodwell, Nelson, 952, 952; A White, Malpas, Cheshire, 888, 933, Mrs. Clay, Long Preston, 861, 913

Class A. Section 4. White Wyandottes.—Dr. J. E. Helm, Newchurch in Rossendale, 884, 906; A. Snowden Pool, Leeds, 910, 921; Mrs. Clay, Long Preston, 814, 887.

Class A. Section 5. Rhode Island Reds.—Sutton and Son, Little Hoole, Preston, 892, 962; M. A. Hindmarsh, Skelton, York, 766, 809; T. Gardner, Garstang, 716, 824.

Class A. Section 6. Any Other Variety (heavy).—Davey and Son, Sutton, Keighley (L.S.), 850, 913; Wright and Fortune, Keighley (Bf.R.), 803, 821; J. N. Readman, Howden (Bf.R.), 727, 762.

Class C. Section 9 Any Variety Light Breed. Single Bird Section.—Wm. Wharton, Keighley (W.L.), 205, 213; Mrs. E. Kaye, Poole, Leeds (W.L.), 199, 204; R and A. Johnson, Chalford, Glouc. (W.L.), 193, 204.

(Continued at Foot of Column, Page 139.)

Correspondence.

THE EGG FACTORY.

Dear Sir,—I have read with interest Mr. Morton Nance's article on "The Egg Factory" in the August 12th issue of "Eggs," and I beg to submit a few comments upon it, and alternative suggestions.

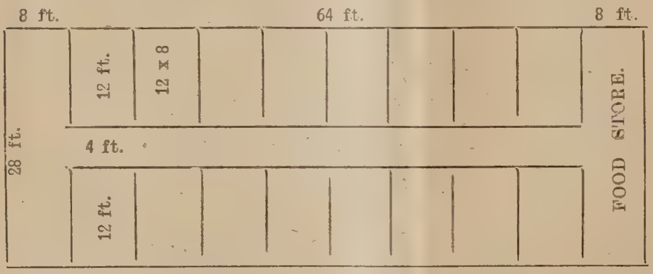
(1) Water Tank.—This is very large (16ft. x 6ft. x 5ft., from sketch) and would hold 4,800 gallons of water, weighing 13.4 tons, apart from the weight of the tank itself. This is an obvious oversight on the part of Mr. Nance. One point, however—how does the water get up to the tank? If by main, why a tank—why not direct into the troughs? If by hand, it would be much quicker to fill by hand or by small hand pumps from ground level.

(2) Why lift food wholesale to the second storey, and then throw it down again?

(3) It is not clear from sketch whether the bins run down the centre of the house. If so, there is no access either side, and also the end bins and those under the tank are inaccessible. Storage space in the bins is approximately 608ft. long and 3ft. high, and presumably about 3ft. across=540 c. feet This would hold a large amount of food, would it not? The wasted floor space on the second storey is, therefore 64ft. x 24ft., less area of bins (60ft. x 3ft.), i.e., 1,356 sq. feet. This would accommodate approximately 339 birds (allowing 4 sq. feet to a bird).

(4) Cost of such a building structurally strong enough as regards tanks and second floor would be well over £600.

I quite agrce that labour-saving is of the utmost importance, and submit an alternative design:—



Single storey, span roof, 80ft. x 28ft. with food store 28ft. x 8ft. at one end, and egg and dead stock room the other.

Water laid on to each pen, either from main or from two small tanks at one end with hand semi-rotary pumps (25s. each). Nest boxes, also allowing for collection of eggs from the central passage. The whole house to slope 9ins. from food store end to the other end, and the passage to be fitted with light gauge rails, down which food truck when loaded will roll slowly. Food truck to be fitted with egg-rack above. Dry mash to be mixed in a barrel, which can be rotated over and over like a butter churn, and then emptied into the truck. A poultryman then walks down distributing mash (or grain) right and left, picks up eggs with the truck rolling down. On the return journey the previously graded eggs, dead poultry, etc., are picked up. Such a lay out, complete with trap-nests, perches, water laid on, troughs, truck, etc., could be made for £280 by a local carpenter in five weeks.

Yours faithfully,
E. ISMAY.

THE EGG FACTORY.

Dear Sir,—The ingenious "Egg Factory," as described by Mr. Morton Nance in your issue of the 12th inst., seems to me, on hygienic grounds alone, to require his further careful consideration.

Even if the floor of the loft was to be entirely closed in (which, with the proposed "perforated iron grids" and "traps," is clearly not the case), does Mr. Nance seriously think it would be practicable or desirable (1) to store eggs, and (2) pluck, draw, and truss dead stock, immediately over the live stock?

As Mr. Toovey suggests in another column, it may be the universal custom to feed grain to poultry in such a way that much of it gets mixed with the excreta of the birds, but Mr. Nance's proposal to drop the grain through feeding grids, over small specified areas seems to be worse still. If these areas are cleaned out every day all well and good. But in any case I should substitute properly adjustable automatic feeders. In my experience the ground under a feeder is always bare of litter, and must be kept clean. The same would apply to the floor immediately below the grids.

Having decided to have a tank in the roof, Mr. Nance might have mentioned how he proposes to fill it. Nothing is included in his estimate for installing a pump or engine.

Those water butts at each corner would be quite inadequate for the length of guttering shown on the sketch, and what use would they be in conjunction with the tank in the roof? Why not substitute one large tank raised sufficiently from the ground to feed the drinking troughs? And if Mr. Nance must wash his eggs, and prepare his poultry for the table in the loft, a small pump would supply the water required for that purpose. A sink and waste pipe are other items not yet provided for.

Finally, a fowl-house, which is to carry a loft and heavy tank, must be far more substantially built than a one-story building, and I suggest that even including the cost of the extra piece of ground, a good shed adjoining the fowl-house, with a tank on the ground level, would be better, equally effective, and cheaper. But Mr. Nance may say: "What about my labour-saving devices for feeding?"

To this I would reply that by an arrangement of slides, he could quite easily fill his mash hoppers from the outside, and throw in the grain, or fill up automatic feeders in the same way, without risk of insanitary sweepings getting mixed with the food.

Yours faithfully,
HUGH M. BAKER.

Coccidiosis.

GEO. ATKINSON, M.R.C.V.S.

(Continued from Page 125.)

Treatment.—It will be fairly obvious that no treatment can be of much service against Coccidiosis. The parasite is usually well established in the host before observable symptoms are shown, and a drug that is powerful enough to destroy the parasites within the epithelial cells would also damage the delicate lining of the intestinal wall; neither is the Emeria Avium like bacteria, some of which can be controlled by vaccines, hyper-immune sera, bacteriophage, etc. It remains, therefore, to strengthen the lining of the intestines and check the diarrhoea by means of tonics and astringents. The catechu treatment recommended by Fantham and the buttermilk or sour milk treatment have not been improved upon as far as one knows. To quote Fantham:—Ten to fifteen grains of crude catechu are dissolved in one gallon of water. The dark sherry or ale-coloured fluid thus obtained is administered to the birds as drinking water. The solution often darkens in air, but its usefulness is not impaired thereby. The birds drink it with avidity, and a rapid improvement often follows. The treatment is usually only necessary for about en days, and a solution containing ten grains of catechu per gallon is strong enough in most cases. Beach and Carl found that buttermilk was useful n the treatment of Coccidiosis, whereas drugs, ncluding catechu, were not. The buttermilk should be given instead of drinking water, and he diet restricted. Leynen, in the outbreak previously quoted, administered the buttermilk as ollows:—The chickens were given a little grain n the morning and a larger quantity in the evening, in order that they should be comfortable during the night. From the morning to 3 p.m. the diet consisted of buttermilk. After 3 p.m. the buttermilk was withheld in order to prevent fermentation in the crop during the night, and drinking water was put at the disposal of the chicks.

Very many drugs and chemicals have been and are being tried and recommended for the treatment of Coccidiosis, but, as far as one knows, whenever carefully controlled experiments have been carried out, they have shown that the only orms of treatment which give any beneficial esults at all are catechu and buttermilk.

Control.—The best way of dealing with an outbreak of Coccidiosis is to control the disease by preventing the spread of infection from the iseased to the healthy birds, and preventing the e-infection of the birds already diseased. This can be done by isolation or destruction of the infected birds and disinfection of the premises. Medicinal treatment without these measures is doomed to failure, and these measures without medicinal treatment will often be successful in eradicating the disease. But the watchword of those undertaking control of the disease should be Thoroughness, in capital letters. The closest attention to minutest detail is essential for complete success. When we remember that the space occupied by a grain of oats is sufficient to contain approximately one hundred oocysts, one oocyst is enough to infect several chicks, and several chicks infected means commencing all our labours over again, it will be obvious that thoroughness is essential.

When Coccidiosis is suspected the suspected lot of chicks or birds, together with those in contact with them, should be quarantined pending confirmation or otherwise of one's suspicions. By quarantining I mean that they should be shut up in the house or brooder which they are occupying and prevented from coming in contact with any other birds—tame or wild. After every visit to the suspected birds the attendant should wash his hands thoroughly in disinfectant, and disinfect his boots by placing each foot in a shallow pan of strong disinfectant and scrubbing the boot while in the disinfectant until it is quite clean.

When the existence of Coccidiosis has been diagnosed, the following measures should be carried out immediately. If economically practicable, the diseased birds, together with those in contact with them, should be killed and burned. Even if chicks do survive an attack they are likely to be stunted in their growth, so that destruction is not so wasteful as it appears to be at first sight. If destruction of the diseased birds is not practicable, they should be isolated. For thorough and complete isolation they should be put in a house where there is no possibility of contact with other birds, and no possibility of the litter being blown about to be picked up by the healthy fowls or wild birds, which would convey infection mechanically or become infected themselves and spread the disease in their droppings. The drainage, if any, should be trapped immediately outside the house into a bucket of strong disinfectant or into a cesspool, into which quicklime is thrown daily.

The isolated birds should have a separate attendant, who should have nothing to do with other birds, and who, every time he leaves the isolation house, should disinfect himself in the manner already described. If a separate attendant is not available, personal disinfection and keeping a separate overall for use in the infected house is the next best thing.

Class C. Section 10. Any Variety Heavy Breed. Single Bird Section.—M. E. and A. Robinson, Bawtry (L.S.), 205, 220; H. Downsbrough, Denholme, Bradford (W.W.), 216, 226; Alf. Sawyer, Crosshills, Keighley (R.I.R.), 179, 205.

Highest Individual Bird Scores for the Month.—Leslie Williams, No. 261, 28 eggs; Sharpe Bros., No. 139, 27; Allen Bros., No. 1, 27; Harry Nelson, No. 475, 26; H. Kershaw, No. 522, 26; J and W. Brayshaw, No. 409, 26; H. Brown, No. 406, 26; H. S. Robbins, No. 81, 26; H. Downsbrough, No. 468, 25; Allen Bros., No. 401, 25; Latham and Sons, No. 298, 25; H. Highfield, No. 197, 25; G. R. Poole, No. 166, 25; R. Rodwell, No. 131, 25; Mrs. Shaw, No. 182, 25; Geo. Wm Sutcliffe, No. 115, 25; Lord Dewar, No. 44, 25; Tom Barron, No. 21, 25; Will Barron, No. 14, 25.

If the percentage of diseased birds is very large, it becomes very doubtful whether the separation of the diseased from the healthy is worth carrying out, and it may, perhaps, be better to treat the whole flock as diseased and simply carry out the measures which I am about to describe. If the policy of isolation has been adopted, these measures should, of course, be applied equally to the isolated diseased chicks and the healthy chicks from which they have been isolated.

The brooder or house should be dealt with as follows:—First, as much dirt as possible should be removed by scraping, and the scrapings carefully burned. Any old troughs, nest boxes, bits of sacking, flannel, etc., which are difficult to clean and of no great value should be burned also. Then the whole of the interior should be thoroughly scrubbed and washed with soap and water, and the washings put in a hole and mixed with quicklime. Then go over the whole place with a painter's blow-lamp, or, failing that, a solution of not less than 6 per cent. cresol, or undiluted crude creosote may be sprayed over the whole house or brooder and everything in it. Having thoroughly disinfected the house or brooder, it remains to destroy, before they sporulate, any oocysts that may be subsequently voided by apparently healthy birds. Therefore the house should be thoroughly cleaned out at least every other day, and the litter, etc., burned. Only short chopped straw or some similar easily handled litter should be used, and dry food only should be fed in troughs and not scattered about the floor. Any unconsumed food should be removed and burned before giving another feed. A little slaked lime may be scattered on the floor in order to dry it after cleaning. The house should be kept well ventilated and dry.

The runs should be spread thickly with quicklime, and on the following day turned over to the depth of a foot. Birds which have free range should be penned up in a run which has been disinfected for their reception, and the field in which they have been running should be ploughed and sown with some sort of crop, and in any case left unoccupied by fowls for a year.

(To be Continued).

APPLICATIONS FOR MEMBERSHIP.

Mathias, Miss F. A., Rhosdenny, King's Langley, Herts.
Honeywood, E. A. "Gwesdore" P.F., Woodham Ferris, Essex.
Barker, A. S., Higher Kilnhurst, Todmorden.
Shadforth, W., Hall Moor End Claughton, Garstang, Lancs.
Bellord, C G., Knowle Lodge, Lichfield, Staffs.
Nowell, Lawrence, "Woodside" P.F., Hookwood, Horley, Surrey.
Ridge, H. W., 27, High Street, Andover, Hants.
Fish, James, 65, Goldhey Street, Blackburn, Lancs.
Whiteway, H., 28, Small Holdings, Knuzden, Blackburn, Lancs.
Parsons, Wm., Redicap P.F., Sutton Coldfield.
Harvey, Frank, Bretherton P.F., Bretherton, near Preston.
Tarrant, Harry, The Bungalow, "Skerylands," Monk Sherborne, near Basingstoke
Cowper, Miss B., Fenns Farm, West Chobham, Surrey.
Hunter, H. A., "Lyndhurst," Heath Park Road, Romford, Essex.
Shorter, Mrs. A., Knock-Mo-Roon, Great Missenden, Bucks.
Burgoyne, John L., Kirkmichael-by-Maybole, Ayrshire.
Ogilvie, Wilfred, "Brocketts," Much Hadham, Herts.
Andrew, R., Puddlewood P.F., Ormiston, near Edinburgh.
Neave, H. P E., Bleak House, Catfield, Norfolk.

Bacillary White Diarrhoea

Its Control and Eradication.

By **T. M. DOYLE, F.R.C.V.S., D.V.S.M.**

(Continued from Page 127.)

THE CARRIER FOWL.

The carrier fowl is one in which *B. pullorum* i localised in one or more of the internal organs. Th organs infected in order of frequency are the ovary spleen, gall-bladder wall, kidney and liver. The heart blood, bone marrow, and lung do not appear to b infected in the adult.

Carrier birds show no symptoms, and are usuall in excellent condition; the majority of them acquir the infection when in the chick stage. It has bee stated by some writers that carriers may make a com plete recovery in the course of a couple of months, an may then be safely used for breeding purposes. C 42 birds which we have examined the ovary showe extensive pathological changes of a chronic characte in 29, giving a percentage of 69.

It may be concluded that in such cases recover would be unlikely to take place, and that the bir would remain a potential source of infection for life.

The following experiment was carried out to asce tain what percentage of carriers recover, and if the were sufficiently numerous to be of practical impor ance.

Fourteen carriers, one year old, were put unde observation. Eleven agglutination tests were mad of each bird at intervals of one month.

The results were as follows:—

(1) Ceased to react to agglutination test and co sidered to have recovered = 3 or 21 per cent.

(2) Reaction to test increased = 5 or 35 pe cent.

(3) Reaction to test decreased, but still pos tive = 5 or 35 per cent.

(4) No change in reaction to test = 1 or 7 pe cent.

Therefore, of 14 carriers, which presumably acquire the disease in the chick stage, 77 per cent. were sti infected at two years of age, and 21 per cent., whic were infected up to the age of 12 months, recovere during their second year.

A series of agglutination tests of carrier birds mad during a period of one year has shown that in a certai percentage of cases there is a gradual decline in th agglutinin content to zero, which probably signifie the complete elimination of the organism from th system. A bacteriological examination of these bir gave negative results. The number of birds in whic this occurs is too small to be of practical importance

DAY-OLD CHICKS CAN CONTRACT THE DISEASE B CONTACT WITH "CARRIERS."

The following experiments prove this point:—

First. Twelve day-old chicks were housed with carrier hens. The adult birds had been kept in th house for some months prior to the introduction of th hicks, with the object of bringing about a heavy in- ection of the ground. Two chicks died on the 14th ay, one on the 15th, and one on the 16th, and a acteriological examination in each case showed death o be due to B.W.D. Twenty control chicks from the ame hatch remained healthy up to one month, when hey were discontinued.

In a second experiment, carried out under similar onditions, but with a different lot of carrier birds, wo chicks died on the 5th and one on the 6th day.

In a third experiment nine day-old chicks put in ontact with 16 carriers remained healthy up to one onth, when they were discontinued.

These experiments prove that carrier hens are able liberate the *B. pullorum* in the faeces as well as rough the eggs. The runs thus become contami- ated, and chicks may pick up the infection, or it may e carried to them by indirect means. This observation rovides an explanation of those mysterious outbreaks hich sometimes occur amongst the progeny of pre- umably healthy stock. In future, when investigating ch cases, the possibility of the disease originating om indirect contact with carrier birds on the same emises must not be overlooked.

THE AGGLUTINATION TEST.

There appears to be considerable doubt amongst ultry farmers as to the value of this test. A great al has been written about it in the lay press, and not ways accurately. It appears advisable to deal with is subject in detail. The test is extremely delicate d reliable, and is of indisputable value in the detec- n of "carrier" birds, but, like all serological tests, is not infallible. Experience has shown that it is ually reliable for the diagnosis of B.W.D., as it has ready proved to be for certain other diseases, such contagious abortion of cattle and typhoid and para- phoid fevers of man.

The test is based on the presence of substances, own as agglutinins, in the blood serum of infected imals. There are no agglutinins for the *B. pullorum* the serum of healthy fowls, therefore they never ve a positive reaction to the test. A positive action is generally regarded as signifying past or pre- nt infection. In the case of B.W.D. a positive action would appear to indicate present infection. is conclusion is based on the results obtained from e bacteriological examination of a large number of actors.

To carry out the test properly it is essential to know e lowest dilution, in which complete agglutination curs, that should be considered as positive. This portant point has not hitherto received the attention deserves. In America agglutination in a dilution 1/33 is regarded as a positive reaction, and in this untry in a dilution of 1/50, and in lower dilutions as ubtful. As the result of work carried out at the nistry's laboratory, we now consider complete glutination in a dilution of 1/25 as a positive action. The organism has been recovered from the ernal organs, and from the eggs of several birds th this titre.

An examination has been made of forty-two react- hens, and from 37 the organism was recovered, ing a percentage of 88.

The five negative cases occurred at the commencement of this work, and the failures were probably due to faulty tecnique. A slight modification was made, and since then the organism has been recovered from every case. These figures prove conclusively the great value of the agglutination test in the detection of carrier birds.

(To be continued.)

HARPER-ADAMS' AGRICULTURAL COLLEGE, NEWPORT, SALOP.

POULTRY LAYING TRIALS, 1924/25.

REPORT FOR THE TENTH PERIOD.

The termination of the 10th period (11th July to 7th August) brings several changes in the leading positions in some of the Sections, and the margin of value separating some of the pens is so small that the ultimate Section leadership is very open. Pen 79, however, still maintains its excellent record, and leads the Small Flock Trials by a good margin.

In the White Leghorn Section Messrs. Purdie's Pen 41 has suffered a severe misfortune in the death of one of the birds, and as the reserve bird in this case has a blank record the pen drops considerably, after occupying the second position for nine months.

Egg production during the period has been normal, a total of 23,841 eggs having been produced by all the competing birds, giving an average of 14.3 eggs per bird, compared with 14.5 for the corresponding period last year. In the Championship Sections the light breeds again show a superiority in production compared with the heavies of nearly three eggs per bird for the period, and for the first time have a better total average in number of eggs, although the advantage in value still rests with the heavies.

A number of birds have gone into moult, and many have been broody during the period. The following is a summary of the leading positions:—

SUMMARY OF THE LEADING PENS—CHAMPIONSHIP TRIALS.

Section 1.—Light Breeds.—A. White (Bl. L.), Malpas, Ches., 1839 eggs; Frank Snowden (W.L.), Keighley, Yorks, 1756; Miss N. H. Bell (W.L.), Ightham, Kent, 1839; H. Sutton and Sons (W.L.), Preston, 1767; G. B. Metcalfe (B.L.), Lechdale, Glos., 1770.

Section 2.—Heavy Breeds.—E. Watson (W.W.), Colne, Lancs., 1798 eggs; G. B. Metcalfe (W.W.), Lechdale, Glos., 1802; Miss H. Fowler (W.W.), Blackburn, 1920; W. Lister (L.S.), Northiam, E. Sussex, 1707; G. W. Reeves (R.I.R.), Whitchurch, Salop, 1744.

SMALL FLOCK TRIALS.

Section 1.—White Leghorns.—W. McMahon, Newton Mearns, Renf., 1207 eggs; F. A. Welch, Cheltenham, 1197; Cotswold Pedigree Farm, Stroud, Glos., 1200; Capt. J. Thompson, Shrewsbury, 1171; G. Keith Simmons, Honiton, Devon, 1113.

Section 2.—White Wyandottes.—D. W. Gunston, Reading, 1128 eggs; Allen Bros., Harrogate, 1110; Frank Snowden, Keighley, Yorks, 1085; Mrs. A. Wilson, Garth, Breconshire, 1085;; E. N. Sikes, Ingatestone, Essex, 1059.

Section 3.—Rhode Island Reds.—F. and A. H. Sanders, Rugby, 1143 eggs; Mrs. Molloy, Crumlin, Co. Ant., 1140; Dashwood Farms, Ltd., Deddington, Oxon, 1026; R. Green, Preston, Lancs., 1034; Mrs. H. E. Powell, Rugby, 979.

Section 4.—Sussex.—Capt. A. A. Plimpton, Beverley, E. Yorks, 1056 eggs; F. Rossall Sandford, Shrewsbury, 989; W. Bradbury, Bury, Lancs., 1000; A. Robinson, Bawtry, Yorks, 1037; A. Hughes, Malpas, Cheshire, 997.

Section 5.—Black Leghorns.—W. A. Lansley, Whitchurch, Salop, 1062 eggs; C. L. and J. A. Thompson, Holywell, 1072; Mrs. M. B. Cowley, Abingdon, Berks; 999; Wilson Beattie, Rothersthorpe, Northants, 986; N. S. Robinson, Spilsby, Lincs, 1051.

Section 6.—Any Other Light Breed.—S. Street-Porter (An.), Ely, Cambs, 1008 eggs: W. Hamnett (An.), Blackpool, 986; Storer Bros. (An.), Manchester, 948; H. Lyndon Lemon (La Br.), Devizes, 975; C.W.S. (An.), Whalley, Lancs., 968.

Section 7.—Any Other Heavy Breed.—Miss P. Mills (Rks.), Shropshire, 1116 eggs; F. R. Welch (Rks.), Bewdley, Worcs., 995; O. C. Brown (Rks.), Scunthorpe, Lincs., 1050; P. E. White (Rks.), Market Drayton, Salop, 994; Mrs. J. M. Walker (Barn.), Newdigate, Surrey, 991.

SINGLE BIRD TRIALS.

Section 1.—White Leghorns.—W. Hamnett, Blackpool, 225 eggs; W. M. Golden, Leire, Rugby, 224; S. E. Illingworth, Bradford, 219; N. S. Robinson, Spilsby, Lincs, 205; F. S. Low, Godstone, Surrey, 209.

Section 2.—White Wyandottes.—Mrs. Alec Wilson, Garth, Breconshire, 233 eggs; S. and T. Greenall, Grantham, 202; A. Hughes, Malpas, Cheshire, 201; S. Street-Porter, Ely, Cambs, 194; W. Barron, Preston, 198.

Section 3.—Any Other Light Breed.—S. Street-Porter (Bl. L.), Ely, Cambs, 196 eggs: A. White (Bl. L.), Malpas, Ches., 196; R. A. and A. H. Johnson (Bl. L.), Chalford, Glos., 195; Chivers and Sons, Ltd. (Bl. L.), Cambridge, 194; W. Hamnett (An.), Blackpool. 179

Section 4.—Any Other Heavy Breed.—R. Green (R.I.R.), Preston, 201 eggs; T. Barron (R.I.R.), Preston, Lancs., 195; A. White (L.S.), Malpas, Ches., 184; W. M. Golden (L.S.), Leire, Rugby, 173; E. Leslie Pattison (R.I.R.), Longton, Staffs, 166.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

H. J. H. (King's Neston) writes that he has some White Leghorn pullets four months old. They have developed grand bodies, and are just shooting their combs. They are longer in the leg than he would like—possibly this is the trouble. They are weak in the legs. They have been reared intensively; the cockerel in the breeding pen was a big leggy. The pullets when walking pick up their feet stiff—not a nice easy gait—and when fed go down on their hocks. He asks: "Do you think they have overgrown their legs, as they have grand bodies?" (2) "Is it because the earth floor is too dry?" "What shall I do?" "I am thinking of giving them a bit of garden."—I expect these birds have grown a little too rapidly. "H. J. H." would be wise to give them a bit of garden for a time, as working in the loose soil might help them considerably, but, in addition to this, it would be advisable to give them two teaspoonfuls of cod liver oil to every one pound of mash, otherwise his feeding would be the same. Just reduce the bran now to two parts.

"Novice" (Pitlochry) writes that at present he is able to get a lot of scraps of bread, stale scones, etc. These he dries in the oven and grinds up in a small mincer. He is using my formula both for chickens and the one for the few laying hens he has. He adds about equal parts of this ground, dried bread to their feed, which also contains boiled scraps, vegetables, etc. He now asks: "Has this dried bread any feeding value over and above what is contained in your two feeding formulas?"—I must confess that I do not know exactly how he is feeding. Apparently with my formula, boiled scraps, and vegetables, and this dried bread, but in what proportions I do not know whether the scraps exceed the formulae or not. In answer to this question: The dried bread would not have any feeding value over and above what is contained in the two feeding formulae. Approximately it would be equal in value to the ground oats or maize meal. I am pleased to know that "Novice" has gained much information since taking "Eggs."

H. G. B. (Ipswich), with many others who ar writing now, is troubled with lice among his birds, an asks a means of ridding his birds of them.—W generally acknowledge that Commercial Crude Sodiu Fluoride is the most satisfactory agent, because it no only kills the lice, which are actually alive, but thos which hatch subsequently. One pinch applied to th head, one on the neck, two on the back, one on th breast, and one on the tail below the vent, and one o the inner side of each wing will be effective in four o five days, or a quicker way is to dip the birds, holdin them with the wings over the back, with the lef hand. The bird is submerged in the solution, wit the head out; ruffle the feathers thoroughly with th right hand to secure penetration of the fluid to th skin all over the body, and duck the head once or twic withdraw the bird and release it. One ounce of th Sodium Fluoride should be mixed to each gallon tepid water. Of course, a warm sunny day is neces sary for this method. The method strongly recommen ded by Herrick is a dusting powder made in the fo lowing manner:—2½lbs. of Plaster of Paris, spread i a shallow pan or tray, one-fourth pint of Crud Carbolic Acid, poured into a cup, and into this poured three-quarters of a pint of Gasoline Th mixture of acid and gasoline is then poured over th Plaster of Paris, and thoroughly mixed, rubbin through a wire screen on to a piece of paper. It shou then stand from two to two-and-half hours unt thoroughly dry It must not be placed near a flam or any heat. and the powder should be placed in closed jar where it will retain its strength for a lon time.

M. B. W. (Luddensdown) sends sample of drie yeast, which is not satisfactory. She states that fo merly she has had it in a powdered form. This flaked. It is not only on this account that I a criticising it, but because it lacks the pungency a flavour of a good sample, and I am of opinion th something has been extracted from it. M. B. W. al wishes to know how much grain per day a White Le horn pullet three of four months old should have. S says she is giving them 2lbs. wheat, 1lb. oats, and 1 kibbled maize daily, but does not tell me the numb of birds. However, it is better not to feed by weigh That is, to allow the birds so many ounces per da but just to give as much for the last feed as they w pick up in a quarter of an hour. She will soon s what their requirements are, for they vary very mu with the development of the birds.

J. G. A. (Collinsburgh) writes:—"Enclosed samp of soya bean meal is very different from what we ha previously had, which was white, floury, and tasti and smelling very strongly of the bean Is enclos sample up to standard? (2) We have about 60 Lig

Sussex pullets, hatched February 21st. The first egg ppeared about July 7th, and 50 of the birds are now n lay. After producing about a dozen eggs some of he birds have shown broody tendencies, and eight of en have been through the broody coop. Is this likely o bring on neck moult, and if so, can anything be one? The birds in question are all splendid specinens, big, heavy and vigorous. We have fed them ince laying started on your "precocious" mash, and hey get their evening grain in troughs, as much as hey can eat. (3) An egg was laid the other day by one f our White Leghorns. It appeared at the breakfast able the following morning, and when we opened it as found that the albumen was dark coffee coloured. he egg smelt, and tasted quite good. It could not ave been held in the oviduct as the bird had laid nother egg the day before. What can have caused his? (4) Is it dangerous to breed from a cockerel Light Sussex) with a crooked keel if one is definitely atisfied that the cause of this is premature perching, nd not hereditary or improper feeding?"—In answer o my correspondent's questions: This is a sample f extracted soya bean meal, and is quite up to stan-ard What my correspondent previously had was robably soya bean cake meal. In answer to his econd question: If his Light Sussex pullets have ome into lay, laid a few eggs, and shown broody ten-encies, it is very probable that this will bring on the eck moult, and I do not know how this can be voided except by following on the lines which I have dicated, and which my correspondent is carrying out. e will note this was purely experimental, and that is "precocious" mash, as he calls it, is given to avoid is premature moult. I have only suggested a trial, nd am not by any means certain it will effect the esired end. (3) No, this egg could not have been tained in the oviduct. It is quite a different matter. he dark coffee colour may have been due to the bird ting acorns, and, if not that, some substance which ould have resulted in the yolk being of this colour. corns are the most probable. (4) If you are definitely tisfied that the crooked keel is the cause of prema-re perching, and is not hereditary or through nproper feeding, it is not dangerous to breed from the ckerel, as an acquired character cannot be trans-itted.

H. L. (Wadhurst) writes: "We have some cases Bumblefoot among our White Leghorns. Could u let me know the probable cause and best eatment?" Bumblefoot is an abscess of the ot, and occurs from many causes, sometimes rough the perches being too narrow or too high, d, of course, it may be caused by splinters, roken glass, nails, or anything of that kind hich would make a wound which does not heal operly, or in which the foreign matter remains cased. Treatment is very difficult. The most fective is to tie a cord **tightly** about the leg above e foot, to control the flow of blood, and with a arp narrow-bladed knife open up the abscess oroughly. You must get to the bottom and take t the core. It is then advisable to thoroughly ringe out the wound with a two per cent. solution of Izal, smear some ointment or carbolised vaseline round the wound, and then it can be bandaged up. More than this you cannot do. In most cases my experience has been that the bumblefoot is caused by jumping from too high a perch on to a hard floor, but there is no doubt badly-shaped perches will cause it.

A. T. R. (Woolstone) sends two samples—one S.G.O., and one of feed oatmeal. The price of the first being 16s. 6d. and the last 11s. 6d. The ground oats are not "Sussex" ground, but they are an average sample; not nearly as good value as the feed oatmeal. If my correspondent can always rely upon such a good sample as the feed oatmeal sent, I would advise him to use it in place of the Sussex ground oats, but he should be careful that he gets a good sample, as they vary considerably.

"You Say" (Harrington) gives neither name nor non-de-plume, so I am using two words which he used in the questions which he has put to me. He starts: "You say inbreeding causes degeneration, but I have mated brother and sister and have some of the most promising chicks you could wish to see. (2) You say excess of animal food causes prolapsus and liver trouble. I have fed over 20 per cent. fish meal, and never had a single case. (3) You say never breed from pullets. My stock was bred from pullets this year, and the mortality has been very low. You say use light breed males when crossing. I used a Wyandotte cockerel to Leghorn hens, and have a beautiful lot of pullets. You say scaly leg is not inherited. The daughters of three of my hens which are scaly-legged are all suffering from the same complaint."—Well, Mr. "You say," I am not so surprised at your first statement, or, indeed, at any of them as you would like me to be. I did not say that in-breeding causes degeneration, but that indiscriminate in-breeding does, which is a totally different thing. If you have selected two vigorous birds there is no reason why they should not breed very strong, healthy chicks, although they are so closely related, and are more likely to do so than two unrelated birds which are lacking in vigour, but I think with the short experience you have had that you would be well advised not to attempt any more matings of this kind. (2) We have quite sufficient proof that excess of animal food does cause prolapsus, but it does not follow that every hen which gets an excess will suffer. I should not expect an excess of fish meal to have the same effect on low-fecund stock as on high-fecund. I have never said "Never breed from pullets." What I said was, "Never breed from pullets which are from pullets bred." The advice to use light breed males and heavy hens in crossing is a very sound one. It does not follow that you cannot breed healthy and vigorous stock by using the reverse mating, but you will find that by using heavy breed males you will get more broodiness and not such good production. The proof of the pudding will come out in twelve months' time. No, scaly leg is not inherited. The fact that the daughters of your hens are suffering from the same trouble as their dams does not prove that it is inherited. The condition is caused by a parasite, which is found in the soil, and it also crawls along the perches from one bird to another. Some birds appear to be immune. It is often communicated to chicks which are being brooded by hens suffering from this trouble, but it is most certainly not an inherited disease. You will learn some day, "You say," that there can be infection from the dam to the offspring at birth. That is a very different thing from an inherited disease.

G. M. (Thorne) wishes to know whether we have any records which will help him in forming an opinion as to how long a hen is profitable. He believes that we make a great mistake in killing such a large percentage of birds each year on our commercial egg farms, and is of opinion that it would be more profitable to retain a larger number of them. I am afraid, "G. M.," that this is a matter in which I cannot help you, although I certainly agree with you that a large number of birds which are killed every year on the commercial egg farms might be retained with profit. This is altogether rather more a matter of careful selection than laying down an arbitrary rule. It is a curious fact that some birds will do better in their third year than in their second. This has been demonstrated, and the following are some actual records:
A—First year 222, second 182, and third year 217.
B—First year 230, second 153, and third year 192.
C—First year 171, second 154, and third year 164.
D—First year 199, second 107, and third year 134.
E—First year 191, second 88, and third year 150.
The real question, from the point of view of the commercial egg farmer, however, is the value of the eggs laid. A bird in her third year would naturally lay very few during the winter months, but she often makes up for this by producing well into the autumn. We have no reliable figures on which we can base an opinion as to the length of the profitable life of a hen.

H. B. (Farlington) complains that his pullets have laid eggs with very pale yolks, with the result that his customers are dissatisfied, and he fears he will lose them. He is keeping them intensively. From his feeding I gather that this is the cause of the trouble. He would do better to substitute kibbled maize for oats, and make the grain of three parts kibbled maize and one of wheat. He would also be well advised to replace one part of the bran in his mash with a good quality clover meal, and supply as much fresh green food as possible. There has been a deficiency of this, and this, to a large extent, explains the very pale yolks. If he were to replace the barley meal in his mash with maize meal, this would help matters.

POST-MORTEMS.

P. I. Internal haemorrhage following the rup
ture of a liver, which was in a far advanced stat
of fatty degeneration, was the cause. Th
abdominal cavity was loaded with masses of fa
and this no doubt produced a mechanical obstacl
to an egg which was in the uterus ready to b
laid, and so caused the extra amount of strainin
that the liver in its degenerated state could n
withstand.

J. P. The post-mortem examination of th
chicken showed that the immediate cause wa
internal haemorrhage from rupture of the live
but that she was affected with a generalised tube
culosis. The liver was most extensively disease
and the intestines matted together with th
tubercular processes. I am afraid that this wi
not prove to be an isolated case, and should su
pect that the others that have died after showin
symptoms of lameness, a common symptom i
disease of the liver or kidneys, were similarl
affected. Her immediate incontacts should b
rigidly isolated in a freshly disinfected house an
run, and any showing any signs of illness wha
ever immediately destroyed and the carcase
burned. The infected house or houses should b
thoroughly cleaned out and disinfected with
5 per cent. solution of carbolic acid, and afte
wards whitewashed and thrown open to the su
and air. As long an interval as possible shoul
be allowed before re-occupation, or the disease ma
break out afresh.

E. I. The post-mortem examination of th
Light Sussex pullet showed that the cause wa
metro-peritonitis and sepsis from a collapsed eg
in the uterus. It is, of course, not infectiou
although many cases may occur, if the feeding
such, that soft-shelled or shell-less eggs are com
mon. The shell in this case was extremely thi
and brittle, showing a deficiency of lime salts i
the economy.

G. P. The post-mortem examination of th
duckling showed the cause to be infectious cerebr
spinal meningitis, but the carcass showed evidence
of lack of constitutional stamina, which migh
very easily be attributed to the age of the drak
Very little is known about this disease, with th
exception of the post-mortem lesions and its i
fectivity, but there is evidence which leads one t
suppose that the infection comes from the foo
because if an antiseptic is mixed with the latte
the outbreak is in most cases controlled at onc
although the administration of the same drug
the birds has no effect. Sodium hypo-sulphite
the drug in question, the dose for birds of this ag
being 10 grains daily, and it is administered b
dissolving the requisite amount in the water th
is used to mix the mash with.

H. B. B. I am sorry for the delay in sending this report, but there was no way of identifying e bird until your letter arrived to-day. The velling on the face was not due to roup, but was abcess caused by the presence of a splinter at had penetrated from the side of the mouth. he sub-orbital sinus was not involved as in roup, e infection in that disease entering through the eft in the hard palate. At the same time it oked very suspicious until careful dissection of the rts showed the exciting cause.

LANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES.

Council Meeting was held in the Master Builders' Rooms, ount Street, Preston, on Saturday, 8th August, 1925. Present:— s. S. Morsom (Chairman), Mr. J. P. Willacy (Treasurer), Messrs. Sharples, C. Longbottom, T. Edmundson, A. D. Walton, J. shworth, A. Grime, W. Kay, J. Whalley, W. A. Hall, S. J. orter, A. Hallows, F. Ashworth, J. Dawson, H. Winstanley, E. Leigh, G. B. Tootall, C. Birtwell, T. Sutton, and E. Collier, ev. A. J. King, and Dr. J. E. Helm.

Letters of apology for non-attendance were read from Messrs. Barron, C. P. Gough, A. T. Walker, and W. Grove.

The minutes of the last meeting were read, confirmed, and gned.

A letter was read from Mr. E. C. Brown, Secretary of the .P.C., thanking the Blackburn Small Holding Society for a nation of £2 sent to them through the Federation Secretary.

The following were nominated for the Panel of Judges:—Mr. Wilkinson, Standon Hall P. Farm; and Mr. G. Woodward, Heywood. On the proposition of Mr. S. Porter, seconded by ev. A. J. King, they were accepted.

A letter was read from the Poulton Society respecting the ederation's "Recommended Egg Prices." After a long discuson, Mr. Longbottom proposed the Secretary compile a list of ices for the last twelve months of the Federation's "Recomended Price" and the "'Daily Post' Price," and submit same the next Quarterly Meeting. This was seconded by Mr. J. shworth, a notice to be placed on the agenda for that meeting.

Dr. Helm gave a report of the meeting at Harrogate, going to full details. Messrs. J. Whaley and C. Longbottom also oke on same. On the proposition of Mr. A. Hallows, seconded Mr. Ashworth, a vote of thanks for the splendid report was corded Dr. Helm.

The accounts submitted for medals and printing were passed r payment, on the proposition of Mr. G. E. Leigh, seconded by r. Birtwell.

Mr. J. P. Willacy (Treasurer) reported, on behalf of the nance Committee. He stated that a sum of £32 10s. 2d. had en made by the draw. He mentioned several societies had not t paid their affiliation fees, and he hoped they would give me their immediate attention.

Mr. J. Whalley reported on behalf of the Educational Comittee. He said they had been considering a request from East anchester Society, who wished to obtain a suitable schoolroom r Lectures and Shows. Mr. W. A. Hall promised to do what could on their behalf; failing this, the Secretary was inructed to write the Educational Authorities.

Laying Test.—Mr. G. B. Tootall said the arrangement for the 25-26 Laying Test, to be held at the Lancashire County Coun- Farm, Hutton, were complete. Entry Forms will be sent out each Society in the course of a few days.

Mr. S. Marson said the Show arrangements were well in hand, t this Committee wanted to know what the fee must be for e team class. It was decided to charge a 10s. 6d. fee this year stead of 21s. as last year, on the proposition of Mr. J. halley, seconded by Mr. C. Birtwell. Each society to be owed to send one team only.—E. COLLIER, Organising Sec.

LAINDON LAYING TEST—JULY.

Section 1.—5 Pullets (Light Breeds).—F. Freeborn (W.L.), 883 gs; H. J. Thomson (W.L.), 846; H. Maycock (W.L.), 767. nthly Certificate, F. Freeborn.

Section 2.—5 Pullets (Heavy Breeds).—E. V. Bazin (R.I.R.), eggs; H. J. Thomson (R.I.R.), 693; W. Belsham (R.I.R.), 687. nthly Certificate, L. J. Willis.

Section 3.—Single Bird (Light Breeds).—W. Dillenz (W.L.), 204 gs; E. Anglian P.F. (W.L.), 199; Miss N. M. Grubbe (W.L.), 201. nthly Certificate, E. Anglian Poultry Farm.

Section 4.—Single Bird (Heavy Breed).—H. Bush (W.W.), 200 gs; H. Jones (R.I.R.), 187; F. Freeborn (R.I.R.), 170. Monthly rtificate, H. Bush.

Section 5 (Gift).—Any Breed.—W. Dillenz (W.L.), 207 eggs; E. Bazin (W.L.), 170; H. Maycock (W.W.), 156. Monthly Certificate, Dillenz.

First Class Certificate for highest scoring pullet for month, Maycock—26 eggs (Blk. L.). H. MARIES.

S.P.B.A.—Continued.

SOME CORRESPONDENCE—OUR DEPOSIT SYSTEM.

As our readers are aware, we have a deposit system in connection with "Eggs," where, for the small sum of 6d., intending purchasers can deposit the money with us when wishing to buy stock or appliances which are advertised in these columns.

The Rev. E. Goodwin Courtman, of The Priory, Newnham, Gloucestershire, recently advertised in these columns, and Mr. J. L. Burgoyne deposited with us on August 4th the sum of £9 for twenty Light Sussex pullets, which he desired to purchase from Mr. Goodwin Courtman. Mr. Courtman was notified by us on August 4th of Mr. Burgoyne's deposit, and received same on 5th August, but on the same day he wrote to Mr. Burgoyne as follows:—

> "Dear Sir,—I am sorry if I did not enclose my ONLY terms of business. I decided that I would never sell again through the Deposit System, as you are kept too long, even both parties. "Eggs" is a very slow way. I have not heard yet from them, and probably shall not yet awhile. Personally, I would not buy if I did not see the stock. You are very wise in this matter. My terms supply a protection to the buyer. I never send stock which I do not consider are below the standard. I have had a similar application for stock, and the particular paper has had the man's money a week, and never sent to me. As a matter of fact I sold the birds he wanted. Birds are in too big a demand this year to await the whims of an Editor when ready money is at hand.
>
> Thanking you and apologising for any trouble I may have caused you. Do yo know of anyone near who could look at the birds? I have sold to one breeder this morning 150 head alone."
>
> Faithfully yours,

Why did Mr. Courtman state: "'Eggs" is a very slow way. I have not yet heard from them, and probably shall not yet awhile?"

We have had previous experience with him, and any previous delay there was, was due to the fact that appliances were advertised by some agency in London. Much to our surprise all correspondence was forwarded by this Agency to some supply stores, of which Mr. Courtman is apparently the proprietor. Hence the delay, which was not due to the whims of an Editor, but rather to the oddities of an advertiser.

Mr. Courtman is making a deliberate mis-statement when he states that "'Eggs' is a very slow way," and we challenge him to produce any correspondence at any time which will show that there has been a day's delay in any transaction he has had with "Eggs," which has been due to any fault on our part.

His letter to Mr. Burgoyne might be described as a burlesque—he would not buy stock which he did not see, yet he refused to sell through the deposit system, although he is perfectly aware that Mr. Burgoyne lives in Ayrshire, and could scarcely be expected to go to Gloucestershire, and see 20 Light Sussex pullets. Certainly he pays Mr. Burgoyne a compliment when he says: "He is very wise in this matter"; but he also states that his terms supply protection to the buyer. In what way? We know nothing of his terms, and what is meant by his statement: "I never send stock which I do not consider are *below* the standard?"

We wrote Mr. Courtman and asked for an explanation. His reply is altogether unsatisfactory. It is as follows:—

"Dear Sir,—In reply to yours received yesterday. I am very sorry, but I still hold the Deposit System is a slow method of buying goods. I suppose we may have an idea, although it may be a mistaken one. The reference to a paper not sending notification until a week had elapsed had no reference to 'Eggs.' Had this been so the name would have been used, or '**this** particular paper' would have been written. Please rest assured on this point.

Thanking you. Should you think Mr. Burgoyne also read wrongly, I will gladly write him."

He is entitled to hold any idea he may wish as to the Deposit System being a slow method of buying goods, but Mr. Courtman must be perfectly aware that many buyers have found it to their interest to adopt this system in order to protect themselves, and it is used both in the interests of buyer and seller. Further, it is not a slow method of buying goods, as the advertiser is immediately notified on receipt of the deposit, and the money paid to him immediately we receive instructions to do so from the depositor. There is not an hour's delay.

I can only say this, that I would absolutely refuse to buy goods from any advertiser who refused to sell through the Deposit System.

CORRESPONDENCE—Continued.

LAYING TESTS.

Dear Mr. Newman,—Your correspondent, T. J. MacMillan, writes in "Eggs," August 19th, that he has not yet received a schedule for Laying Tests, 1925-26, in which mention is made of the time elapsing from the end of a period until the issue of the report.

Mrs. Vowles, Hon. Secretary of the Yorkshire Federation International Laying Test, the Court House, Benningbrough, York, will supply their schedule on application. In this schedule, Rule 8 reads:—

> "The management will, **immediately** at close of each four weekly period, send to **each** competitor in Classes A. and B. a duplicate of the record sheet, showing the individual laying and weight of eggs of his entries. In addition to this a Monthly Report will be issued to **all** competitors and to the Press. The position of the Leading Pens will be sent to the "Daily Despatch" for publication **weekly.**"

Yours faithfully,
(Mrs.) A. WILSON.

EARLY HATCHED PULLETS.

Dear Mr. Newman,—I have been most interested in the correspondence in "Eggs" on the question of early hatched pullets, and particularly in Mr. E. M. Walrond's letter, published in last week's issue.

I really cannot agree with Mr. Walrond when he states that he does not find that the early hatched pullet is a paying proposition. Personally I hatch out all the heavy breed birds I can in February, as I find that this is the ideal month for producing the best all-round layers. However, in 1923, I hatched out my first batch during the first week in January as an experiment; the majority of these were individually pedigreed to enable me to compare the trap-nest records of the January birds with their March hatched sisters. The following records are taken from my summary record book and are all January hatched birds:—

No.	Commenced.	Sept.	Oct	Nov.	Dec.	Jan.	Egg wht. 1st month.	12 mths
13	1st Sept. ...	26	27	23	22	21	$1\frac{3}{4}$oz.	261
14	1st Sept. ...	26	24	21	23	21	2&2 $\frac{1}{16}$	216
16	3rd Sept. ...	13	18	20	22	22	$1\frac{7}{8}$	209
17	1st Sept. ...	27	27	27	22	24	$1\frac{3}{4}$	280
19	1st Sept. ...	23	24	18	21	12	2 over	culle
20	1st Sept. ...	26	27	23	20	17	$1\frac{7}{8}$	193
21	3rd Sept. ...	23	24	23	21	21	$1\frac{7}{8}$	184
26	1st Sept.	26	24	19	17	4	$1\frac{7}{8}$	208
28	1st Sept. ...	20	13	25	22	24	$1\frac{7}{8}$	200
29	1st Sept. ...	26	27	25	24	26	$1\frac{5}{8}$	260

These numbers are taken in sequence and are not selected. Originals can be seen at this offic any time.

These records keep up the same average throug all the January hatched pullets. Hens No. 3, 1 and 22 were entered in the Harper-Adams' Tria of that year in my pen that finished 4th in th W. Wyandotte small pen section. Now the Marcl hatched birds put up about the same twelv months' averages, but the majority did not commence to lay until October and November, whic meant a month or so of pullet eggs from them jus when egg prices were at the highest, whereas th January birds were all in full swing, laying good sized eggs; also they were laying in September with eggs that year at from 2s. 3d. to 2s. 6d per dozen. Another great point must not be overlooked in the January pullet, and that is th surplus cockerels which met the 1s. 9d. to 2s per lb. market instead of the 1s. lb. for the Marc bird, and for a good vigorous stock cockerel giv me the January hatched bird every time.

I admit these pullets usually have a slight moult but have found that if the food rations are no altered in any way, and the pullets have not bee forced, this autumn partial moult does not affec their laying in the slightest. Possibly this distric is more favourable to the early hatched pullet. I should be interesting to hear the opinions of othe breeders.

Yours very truly,
GOODWIN PREECE.

BOARD OF AGRICULTURE FOR SCOTLAND EGG-LAYING TEST, 1924-25.

Egg Production of Leading Pens at end of Tenth Period... 21st July, 1925.

Figures are Total Eggs and Points to date respectively.

Section 1. White Leghorns.—D. Baxter, Lanark, 1140, 1108; Prentice, Uddingston, 1097, 1024; J. W Dobbie, Rothesay, 1127, 9

Section 2. White Wyandottes.—R. A. Oliver, Boarhills, Fi 1025, 967; W. Bradbury, Tottington, 1026, 772.

Section 3. Rhode Island Reds.—Mrs. Logan, West Kilbri 1114, 1112; H. P. Roche, Stevenston, 972, 957.

Section 4. Non-Sitters other than White Leghorns.—Jacks and Johnstone, Stonehouse, 960, 958; R. Scott Miller, Uddingsto 1003, 942.

Section 5. Sitters other than in Sections 2 and 3.—J. Ada Cleland, Lanarkshire, 928, 927; Mrs. I. Craig, Borlandhills, Du lop, 866, 866.

Section 6. Ducks.—H. S. Godsmark, Ashford, Kent, 1168, 111 S. E S. Burnett, Colliston, Arbroath, 952, 945; Capt. R. A. Lo Shefford, Beds., 952, 945.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, AUGUST 21st, 1925.

GRAIN AND FEEDING STUFFS.—Limited supplies of old rop British wheat make recent rates, except at London, where rices have declined from 12s. 5d. to 12s. 3d. per cwt. Samples ı new wheat are sparingly offered at London, but the amount ł business passing is not sufficient to warrant average quotaions being given. New crop barley is in small supply at resent, while old feeding samples meet a quiet trade, but are enerally unchanged in value. A few samples of new oats are n offer at Hull and London, white varieties making about 10s. nd black about 9s. 6d. per cwt.

Imported wheats are sparingly offered and meet a moderate rade, Australian being unchanged in price, but No. 1 Manitoba s slightly dearer at most markets. Foreign feeding barley ıeets a quiet trade at irregular prices. Imported oats are in air request and recent values are fully maintained. Maize is carce and dearer, the average quotation being 11s. 5d. per cwt.

Milling offals and meals are mostly in good demand, late ates being fully maintained, while bran is 5s. per ton dearer t Hull and Liverpool, and coarse middlings from 2s. 6d. to 5s. er ton dearer at most markets. Linseed cake, owing to scarcity nd the high price of seed, realises more money. Cotton-seed ake has also advanced in price.

MILLERS' OFFALS.—Bran (British): Bristol, £7 17s; Hull, 7 2s; Liverpool, £7 10s; London, £7 7s. Broad Bran: Bristol, 9 2s; Hull, £8 12s; London, £8 15s. Middlings—Fine (Imported): ondon, £9 15s; Coarse (British): Bristol, £9 10s; Hull, £9 5s; iverpool, £8 15s; London, £8 10s. Pollards (Imported): Bristol, 8; Hull, £7 10s; Liverpool, £7 7s; London, £7 7s. Rice Bran: ristol, £7 17s; Liverpool, £7 7s. MEAL.—Barley Meal: Bristol, 12 2s; Hull, £11 13s; London, £12 5s. Maize Meal: Bristol, 12 17s; Hull, £12 2s; Liverpool, £12 7s; London, £12 5s. Maize eal (S. African): Bristol, £11 12s; Hull, £10; London, £10 5s. aize Germ Meal: Hull, £11; London, £10 10s. Maize Gluten eed: Bristol, £11 15s; London, £10. Locust Bean Meal: Bristol, 10; Hull, £10; Liverpool, £9 10s; London, £9 17s. Bean Meal: ristol, £13 15s; Hull, £11 18s; London, £13. Fish Meal: Bristol, 20 10s; Hull, £20 10s; Liverpool, £20; London, £20 10s.

EGGS AND DEAD POULTRY.

Light supplies of British and the best imported eggs are bout equal to requirements, business being restricted by the resent high prices. Second-grade eggs are fairly plentiful, but ade for these also is affected by the enhanced rates. Supplies f dead poultry are equal to requirements, very little business eing transacted and prices tend to be easier.

Week-end Prices—Eggs (per 120): British, 19s 9d, 17s 3d; Irish, s 0d, 16s 6d; Danish, 19s 6d, 18s 3d; Dutch, 20s 6d, 18s 6d; French, s 6d, 17s 9d; Belgian, 18s 0d, 17s 0d; Italian, 17s 3d, 16s 3d; ussian, 13s 0d, 12s 0d; Lithuanian, 14s 6d, 13s 6d; Chinese, s 6d, 12s 0d; Polish, 13s 0d, 12s 0d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish, 1d, 1s 0d; Others, 1s 6d, 1s 1d. Ducks, 1s 4d, 11d. Geese, 1s 0d, d.

EGGS.

Per Doz.—Ashford: First, 2s 6d; Second, 2s 4½d. Birmingham: irst, 1s 9½d; Second, 1s 9d. Bridgwater: First, 2s 2d; Second, 11d. Chelmsford: First, 2s 3½d; Second, 2s 1¾d. Colchester: irst, 2s 4¾d; Second. 2s 1¼d. Doncaster: First, 2s 0d; Second, 10d. Dorchester: First, 1s 11d; Second, 1s 10d. Exeter: First, 0d. Hereford: First, 1s 7d. King's Lynn: First, 1s 9d; Second, 7d. Llandilo: First, 1s 10d. Mold: First, 2s 0d; Second, 1s 11d. ewport (Mon.): First, 2s 0d; Second, 1s 10d. Norwich: First, 11d. Oswestry: First, 1s 11d. Penzance: First, 1s 10d; Second, 9d. Saffron Walden: First, 2s 6½d; Second, 2s 1¼d. St. Ives Iunts): First, 1s 11d; Second, 1s 10d. Salisbury: First, 2s 2d; econd, 2s 1d. Skipton: First, 1s 9d. Truro: First, 1s 10d; econd, 1s 9d. *Carlisle: First, 1s 11d. *Derby: First, 1s 11d. pswich: First, 2s 3d; Second, 1s 9d. *Lincoln: First, 1s 10d. hrewsbury: First, 2s 0d; Second, 1s 11d. *York: First, 1s 11d; econd, 1s 10d.

FOWLS.

Per lb.—Birmingham: First, 1s 3d; Second, 9d. Doncaster: irst, †5s 0d; Second, 4s 6d. Exeter: First, 1s 4d. Hereford. irst, 1s 4d. Llandilo: First, 1s 10d; Second, 1s 8d. Newport Ion.): First, 1s 9d, Second, 1s 4d. Truro: First, 1s 5d. *Derby: irst, †5s 0d; Second, 4s 0d. *Ipswich: First, 1s 8d; Second, 1s 6d. incoln: First, †5s 6d. Second, 3s 6d. *Shrewsbury: First, 6d; Second, 1s 4d. *York: First, †5s 0d; Second, 4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 4d; Second, 1s 2d. Doncaster: irst, †5s 6d; Second, 5s 0d. Exeter: First, 1s 3d. Hereford: rst, 1s 3d. Llandilo: First, 1s 9d; Second, 1s 8d. Truro: First, 4d. *Derby: First, †5s 0d; Second, 4s 0d. *Ipswich: First, 5d. *York: First, †5s 0d; Second, 4s 6d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those id to producers by retailers. † Per head.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 84, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

THE MIDLAND AGRICULTURAL AND DAIRY COLLEGE.

Sutton Bonington, Loughborough.

POULTRY CONFERENCE, September 24th, 1925.

Programme.

MORNING SESSION: 10 a.m.—1 p.m.—Chairman's opening remarks. "The Poultry Flock Should Pay Dividends—How and Why?" by Professor Willard Thompson, B.Sc. (Agr.), Director of the National Institute for Poultry Husbandry. Discussion. "The Prevention and Eradication of Poultry Diseases," by Albert H. Brain, Esq., West Bromwich. Discussion. Lunch 1 p.m.

AFTERNOON SESSION: 2.15—4.30 p.m.—"The Sussex Method of Table Poultry Production, with special reference to the disposal of the commercial farmers' surplus cockerels." by J. H. Dowden. Esq., Heydown, Sussex. Discussion. (Please note that Mr. Dowden will bring foods, etc., with him and demonstrate the mixing of same). "The Dangers of Extremes in Poultry Keeping," by George A. Palmer, Esq., Hinckley. Discussion. Tea, 4.30 p.m.

NOTES.—All persons interested are cordially invited to attend. Accommodation can be provided in the College Hostel for not more than 50 persons for one or more days at the following charge: 10s. 6d. per day per person; application must be made in advance. For those not staying in the College Hostel, lunch and tea will be provided at the following charges:—Lunch, 2s. each; tea, 1s. each; tickets may be obtained at the office prior to or on the day of the Conference. Visitors may inspect the College buildings, farms, dairy and poultry pens. The College is within ten minutes' walk of Kegworth Station on the L.M.S. Railway Company's main line from London to Derby.

Classified Advertisements.

(PREPAID RATES).

1d. per word—minimum charge, 1s. 0d. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS, per line, extra 9d.
DAY-OLD CHICKS, „ „ 1s.
DAY-OLD CHICKS „ „ 1/6

The number of letters, punctuations and spaces between words should be totalled, when the following table will be of assistance:—

9d. size allows for Thirty-one to one line.
1/- size allows for Twenty-seven to one line.
1/6 size allows for Twenty-one to one line.

When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

N.B.—Advertisements, unless accompanied by correct amount, will not be inserted.

Advertisements must be distinctly marked with the Heading under which they are to appear.

Advertisements must be written on a separate sheet of paper, and one side of the paper only.

Name and Address to be counted. In the case of a Box Number being used, the words, "Box," "Eggs," 94, Farncombe Street, London, S.E.16, to be counted as eight words, i.e., making a total extra charge of 1s. 8d. (1s. for Box; 8d. for address) per insertion.

Advertisements must reach this office
FIRST POST FRIDAYS
for insertion in the following Wednesday's issue. Those received after this time will be inserted in the next issue.

PLEASE WRITE CLEARLY, and TO AVOID MISPRINTING OF STRAINS, NAMES AND ADDRESSES, THESE SHOULD BE WRITTEN IN PRINTED CHARACTERS.

Displayed Advertisements.

Ordinary Page, £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 6d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Positions by arrangement. Discounts for Series. Full Scale of Advertising Rates on application.

Advertisements, addressed to Mr. S. H. BURLES, "EGGS," 94, FARNCOMBE STREET, LONDON, S.E.16, **MUST REACH US BY FIRST POST FRIDAY MORNINGS,** for insertion in following issue. Those received later will be inserted in the next issue.

A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to The Beeches, Rudgwick, Sussex.

EGGS.

FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C., Longwick P.F., Princes Risborough, Bucks. R.I Reds, Eggs, Chicks, and Stock Birds. List free. Satisfaction insisted on. (See under Ducks and Drakes also).

PULLETS.

FOR SALE.

Great Fransham Poultry Farm, Dereham, Norfolk. First Cross Pullets available; three months old, 5s. 6d.; four months old, 7s. each; carriage paid; cash with order. Money gladly refunded if not amply satisfied.

H. Lake, Breeder and Exporter, offers fine Cross Pullets, January, February, and March hatched; 6s. 6d., 6s., and 5s. each. Rhodes and Pures, 7s 6d. each. Guaranteed all healthy and well grown. Your satisfaction assured.—Poultry Farm, Topcroft, Bungay, Norfolk.

1925 Hatched R.I.R. Pullets, Own-Crowley-Boucher; February, March and early April; all from trap-nested dams; beautiful, well-developed birds. Price 15s. to 21s. each. Ten years' continuous trap-nesting.—Mrs. Worssam, Pyrcroft House, Chertsey.

Ten Leghorn R.I.R. Pullets, March, 1925, hatched; 5s. 6d. each; carriage paid. Approval.—Wm. Howard, Fransham, Dereham, Norfolk.

1925 Crop of Pullets and Cockerels for sale; all varieties; also imported American Mammoth Bronze Turkeys.—Particulars from Mill Poultry Farm, Halesowen.

WHITE WYANDOTTES.
1925 PEDIGREE PULLETS,
Gunn-Wharton. March, 12s.; April, 9s. Carriage paid. Cash with order. — Capt. Roberts, Hayes' Poultry Farm, Ashley Heath, Ringwood, Hants.

Ful-O-Pep Laying Mash
and
Ful-O-Pep Growing Mash
are renowned the world over for producing profitable poultry.

FUL
TRADE **-O-** MARK
PEP
POULTRY MASHES
NO MIXING: NO HEATING WATER: NO TROUBLE

Write for the revised edition of the Ful-O-Pep Handy Monthly Guide—the most valuable book on Incubation, Rearing and Poultry Husbandry. This book has detailed suggestions for every month in the year. Also 12 monthly egg charts for you to record your eggs. Sent free and postage paid.

Ful-O-Pep Poultry Feeds are made and guaranteed by Quaker Oats Ltd., 11 Finsbury Square, E.C.2.

PULLETS.

FOR SALE.

Three Boucher direct Pullets; Co
direct from Boucher's 312-egg hen, 19
£3 5s.—Miss Robertson, Withington R
tory, Glos.

Eighty R.I.R. Pullets, January, Februa
March hatched; sire direct from Bouche
312-egg hen; 10s. 6d each. Six R.I.R. P
lets, 1924, 7s. 6d. each.—Miss Roberts
Withington Rectory, Glos.

Pullets and Cockerels. Light Sus
Rhode I. Reds. White Wyandottes, a
Black Australorps, from 7s. 6d. each.—M
Munday, Mersham, Kent.

Genuine Breeding Stock, brothers to p
Rhode I. Reds Pullets leading Lancash
Laying Test; £1 each. Sisters, 10s Wh
Leghorns, 1924; pullet records over 2
sire's dam 278; 6s. 1925 Pullets, 15s.;
for laying tests. Cockerel, 10s. Full pe
gree given. Approval. Carriage paid.
Lumb, Fairfield, Hebden Bridge.

R.I.R. Pullets, February hatched, Art
Snowden's.—Apply, R. Channon, Farw
Colyton, Devon

Pullets, three to four months old, 6s.
7s. 6d., 8s. 6d.; carriage paid.—Wood
Bacon, Arle Poultry Farm, Cheltenham.

1925 PULLETS, ALL FROM 2oz. EGG
Utility White Leghorn Pullets, tr
nested stock; only 2oz. eggs incubat
from 10s. 6d. each. Individually pedigr
from hens who laid over 200 2oz. eggs
their pullet year; 35s.—Champions P
Beaminster, Dorset.

WHITE LEGHORN PULLETS.
April hatched, bred from trap-nested a
blood-tested stock; 10s. 6d and 12s.
carriage paid. — Godsmark, Sellindge, A
ford, Kent.

LIGHT SUSSEX PULLETS.
January, February and March hatch
from picked Franklynn strain hens, ma
to cockerels from Fred Gardner's 1923 M
land Test winners; 10s. 6d. to 15s.; c
riage paid on six — Spencer Jo
M.S.P.B.A., Combe Poultry Farm, Li
Waltham, Chelmsford.

1925 PURE-BRED PULLETS
Four, Five, and Six Months old; 10s.
12s. 6d., and 15s. each.
RHODE ISLAND REDS.
Mrs. A. J. Moore's large egg strain.
BUFF ROCKS.
Splendid layers of large eggs.
WHITE WYANDOTTES.
Full details on application. Carriage p
On approval.
R. S. KEEP,
EAST BUDLEIGH,
DEVON.

BLACK LEGHORNS.
GOLD AND SILVER MEDAL WINNE
PULLETS FROM 8s 6d.
Well-grown birds; large egg strain.
ALLDAY and RAWSON,
Poultry Dept., Fotheringhay Manor Fa
Peterborough.

DERRINGSTONE
RHODE ISLAND PULLET
We are now booking orders for
Autumn for our early-hatched Pull
Wonderful colour and excellent win
layers. Quotations and particulars
application.—Percival F. Gleed, Derri
stone Poultry Farm, Barham, near Can
bury.

Wednesday, September 2nd, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

egistered at the G.P.O. as a Newspaper.
ol. XII. No. 10. Copyright.

Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months „ „ 6/4
Three Months „ „ 3/3

AUG 1 1949
UNIVERSITY OF ILLINOIS

SPECIAL PEN—WHITE LEGHORNS (1925).

Headed by Jan.-hatched cockerel, son of hen No. 10, record 274 in pullet year, weight at end of pullet year 4 lbs., from sire with dam's record of 291.

Hen No.		record	eggs in	Weight at end of production.
Hen No.	88	record 260	eggs in 12 months	4lb.
„ „	209	„ 241	„ (incomplete)	4lb. 4oz.
„ „	216	„ 447	„ 2 years	5lb.
„ „	261	„ 258	„ 12 months	4lb. 8oz.
„ „	309	„ 491	„ 2 years	4lb.
„ „	330	„ 252	„ 13 months	4lb. 4oz.

Hen No.		record	eggs in	Weight at end of production.
Hen No.	404	record 285	eggs in 12 months	4lb. 2oz.
„ „	524	„ 266	„ 13 months	4lb. 2oz.
„ „	555	„ 284	„ 12 months	4lb.
„ „	454	„ 260	„ (incomplete)	4lb. 2oz.
„ „	223	„ 250	„ 13½ months	4lb. 4oz.

COCKERELS for 1926 Season may now be booked from this and other pens.

No. 555. Record 284 in 12 months. Weight 4 lbs.

Pedigree and Price List on application, also of Rhode Island Reds (S.c.) and L. Sussex Cockerels.

Bred and owned by Miss MALCOLM and Mrs. PEMBER,
Wellingham House P.F., Lewes, Sussex.

PRIEST and SHAW

UNDER ROYAL PATRONAGE

Wyandottes ✦ I.O.W ✦ Leghorns

ALWAYS WINTER EGGS

LAYING PULLETS
Ready For Delivery
From Now Onwards.

Book Early to Avoid Disappointment.

WRITE FOR OUR 1925 PRICE LIST.

SANDOWN, - - I.O.W.

The "Heydown" Pre-eminent Strains

deserve praise and get it!

THIS WEEK'S TESTIMONIAL.

17/8/25.

"The 50 White Wyandotte pullets supplied through the Ministry have arrived quite safely. Your birds need no advertising; they advertise themselves, and I must thank you for the manner in which you have executed my order, and for the excellent stock you have supplied me with. (Sgd.) R. W. M. (Atherstone).

**SPECIAL OFFER OF
BLACK LEGHORN PULLETS,
10/6 and 15/-.**

**ALSO INDIVIDUALLY RECORDED 1924 HENS, AND INDIVIDUALLY PEDIGREED COCKERELS,
in our five varieties:
W.L., B.L., W.W., R.I.R., L.S.**

**JOHN H. DOWDEN & SON,
"Heydown," Heathfield, Sussex.**

The 'Eclipse' Poultry Houses

Scientifically Designed.

Soundly Constructed.

Complete in every Detail.

The result of many years' experiments and now the only type of house in use, for all purposes, upon our own farm.

A No. 8 (Three Section) supplied to and used intensively by Mr. G. Calthrop, Junr., Normans, Wells, Norfolk.

At our NEW ADDRESS we have greatly increased our facilities for dealing with our rapidly increasing business.

WRITE FOR OUR CATALOGUE.

HERBERT W. MARTIN, Perivale Poultry Farm & Appliance Works,

EAST HARLING, ATTLEBOROUGH, NORFOLK.

EGGS
THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association
WEDNESDAY, SEPTEMBER 2nd, 1925.

Editorial.

ARPER-ADAMS' CONFERENCE—(Continued).

IETHODS AND PRACTICES OF ARTIFICIAL INCUBATION.

We repeat that it was a great pity that the iscussion on two such important papers as rofessor Thompson's "In-Shell Mortality," and lr. W. B. Thompson's "Method and Practices of rtificial Incubation," should have been limited such a very short time.

Mr. W. B. Thompson's paper was a very excelnt one—eminently practical, and was very much preciated by everyone present.

One question was asked which did not seem to to be quite satisfactorily answered. Mr. rlase Matthews, speaking of a paper read by r. Atkinson, asked Mr. Thompson's opinion on e question of the value of uniform conditions of oisture and carbon-dioxide throughout the hatch. hat we do not understand is what Mr. Matthews eant by a "uniform percentage of carbonoxide." How is this to be regulated? We know well that the percentage of carbon-dioxide uring the early stages of incubation is very conderably less than in the later stages. The erage percentage losses of carbon-dioxide from e eggs is :—

First five days	.157%
Second five days	.768%
Third five days	3.786%
Fourth five days	7.517%
Twenty days	12.228%

What advantage would it be to increase the rcentage of carbon-dioxide during the early ages of incubation? At the Hague Congress is point was raised. We appear to have lost ght of the fact that the disintegration of the shell caused by the action of the carbon-dioxide, and is action is from within and not from without. raise the percentage of carbon-dioxide during early stages of incubation means that we must tificially introduce it in the incubator. The fact at there is a higher percentage of carbon-dioxide der the sitting hen as compared with that in incubator need not disturb us. What tests ve been made have shown that an attempt to artificially increase the supply of carbon-dioxide has had rather an injurious effect than otherwise.

In a report issued by the Virginia Experimental Station, some years ago, it was shown that added moisture increased the amount of carbon-dioxide in the drying machines, and it was suggested that the percentage of chicks alive at four weeks old seemed to be slightly increased by the high carbon-dioxide content of the air. On the other hand, the disinfection of the incubators results in decreased carbon-dioxide, and it never failed to give a better hatch and higher vitality of the chicks.

COCCIDIOSIS.

Mr. Atkinson's excellent paper on "Coccidiosis" has been published in full in these columns. The very drastic methods of disinfection which he suggests would not be altogether easy for poultry-keepers to follow. Reports during the past season definitely show a great increase in losses from this scourge. We know, for example, one farm on which over 3,000 chicks have been lost. In our own experience, which has been a long one, we have never been able to successfully deal with an outbreak unless the birds were repeatedly removed to fresh ground. That course has often been advocated in "Eggs." Apart from this there seems no possible means by which we can avoid the heavy losses which are incurred from this disease year after year, unless we resort to rearing the birds intensively, at least for the first six weeks of their lives.

This is not such an impractical proposition as it is believed to be by many of those who are prejudiced against intensive rearing, and it will be one to which the commercial egg farmer, who rears in large units, will have to give his most serious attention. If chicks were reared intensively it might be possible to deal with an outbreak, and effectively check it. This cannot be done with chicks running over the same ground.

In the case which we have in mind, where 3,000 chicks were lost this season, the whole trouble arose from a pipe-brooder house being used, and healthy chicks had been put on runs which were already infected. It may be asked, "Why was this done?" What **is** to be done on a large commercial egg farm with a fixed brooder house?—a Mammoth incubator full of chicks and no accommodation but the single brooder house? These are the problems which concern us, and one which is not easy to solve.

In one case, of which we have knowledge, quicklime, used at the rate of two tons to the acre, was not found to be effective.

During this spring the question of the liability of the vendor in cases of outbreaks of Coccidiosis has been raised very frequently, and we have had many cases submitted to us. The purchaser of eggs or chicks asserts that he has never had any disease on his farm. He has sent a testimonial to the effect that he is pleased with the eggs, and the hatching results. At four weeks old the chicks begin to die. The post-mortem report is, "Coccidiosis"; then he at once throws the onus on the breeder, refuses to pay for the eggs or chicks, as the case may be, and in some cases claims compensation.

B.W.D.

Capt. Doyle's paper was very informative, and our readers would do well if they were to keep copies of "Eggs" containing this by them for reference. Special note should be made of this statement that a bacteriological examination is the only reliable method of discovering the presence of the disease. Special interest is attached to what he has to say on the Agglutination Test. As to its reliability he entertains no doubt, but there certainly are facts in connection with it which require explanation. We have one or two cases in mind, but will only illustrate one, where a test was made on a number of hens, none of which re-acted. This formed a breeding pen, and the chicks from these birds developed B.W.D., and some heavy losses were sustained.

When the hens were tested again several re-acted. May we say here that the test was made by thoroughly competent persons in both cases. Capt. Doyle mentions that one test is not likely to detect **all** carriers.

What is peculiar in the case mentioned is that several of the birds which were tested were found to be carriers in the second test, and all this occurred within a period of about eight weeks.

His advice that, as soon as the disease has been diagnosed by bacteriological examination, the stock birds should be tested; is, however, very sound; and, unless this advice is followed, it will be agreed that there is very small hope of stamping out the disease.

There is another point of extreme importance in his paper. That is, that infection between diseased and healthy adults **does** occur, and the mention that it is due to gross contamination of the ground.

The past three or four years has seen many poultry-keepers put out of business through heavy losses sustained either by B.W.D. or Coccidiosis, and both Capt. Doyle and Mr. Atkinson mention in their papers that little can be done to stamp out these diseases unless by the voluntary efforts of the poultry farmers themselves.

Modern Poultry Feeding.

By TOM NEWMAN.

FEED OATMEAL.—OAT DUST FEED.—SUSSEX GROUND OATS.

Everyone is desirous of feeding cheaply, but cheap feeding is not always economical. To-day I have received from one of our members two samples, labelled "Feed oatmeal," one at £9 15s. and the other at £7 15s. per ton, and with these came a sample of maize meal at £11 10s. and one of maize germ meal at £10 12s. 6d.

Regarding the feed oatmeal: while the dearer sample was a good one, and could be used to replace Sussex ground oats, that at £7 15s. was not feed oatmeal, but oat dust feed, containing a large proportion of husk, and the hairs of the plant, which have no food value.

A really good sample of feed oatmeal is excellent value, and could, as I have said before, be well used in place of Sussex ground oats. In fact, a good deal of feed oatmeal is sold as Sussex ground oats, but the dust feed is of very low nutrient value, and is unsuitable for poultry feeding.

The maize germ meal sent by my correspondent was an excellent sample, and superior in nutrient value to the maize meal, which, although 17s. 6d. per ton dearer, was inferior.

Here again, the buyer must use his discretion, for many samples of maize germ meal are most unsatisfactory.

DIGESTIBILITY AND GRINDING.

A member from Hatfield sends me a cutting from an article in the "Farmer and Stockbreeder," by Mr. E. T. Halnan. In this Mr. Halnan is made to say :—

> "In his researches Brown noticed that the woody fibre of feeding stuffs was little, if at all, digested by fowls. This was an important point, since the superior merits of 'Sussex ground oats' for poultry fattening was explained by some of its admirers as being due to the fact that the grinding improved the digestibility and made the fibre itself more digestible. An attempt to solve this point was made by the writer, and it was found that no improvement in the digestibilty of woody fibre was obtained by fine grinding."

Now my correspondent states :—

> "I have always understood that which Mr. Halnan attributes to 'some of its admirers,' and have certainly seen it emphasised repeatedly in 'Eggs,' that the finer the grinding the more digestible the fibre. Is this a case where practice is opposed to science, or is it a fact that, provided the quantity of husk is not excessive, fine grinding is not an essential?"

I think my correspondent has mistaken wha has been said in "Eggs," and I will endeavou to put the matter in this way. What is **indigestibl** can never be made digestible by grinding. Now let us take the husk of Sussex ground oats. Her is the analysis :—

Crude Nutrients—Water, 14.0 per cent.. Protein, 1.9 per cent. Fat, 0.5 per cent.; Carbo-hydrates, 45.8 per cent.; Fibre, 32. per cent.; Ash, 5.5 per cent.

When we come to digestible nutrients we find that none of the protein is digestible, or in such an infinitesimal quantity that it cannot be measured.

Of the fat only 2.0 per cent. is digestible; of the carbo-hydrates 16.5 per cent. is digestible; of the crude fibre 10.7 per cent. is digestible.

The grinding would not make the **indigestible** crude fibre **digestible,** but it would make that which was **digestible** far more easily **digested,** because anything which is ground finely can be more readily attacked by the digestive juices.

It is simply a question of the mastication of food, or of its not being masticated. The man who swallows his food without masticating suffers from indigestion, not because the food cannot be digested without being masticated, it can be, but it causes digestive disturbance, because it is less readily attacked by the digestive juices. Sawdust would not be more digestible than wood, because it is insoluble, but ground maize is far more easily digested than whole maize, as the hard outer husk is not easily attacked by the digestive juices.

Now it is a well-known fact that a hen in heavy production digests her food more rapidly than one which is not producing, and it must be evident to us all that a hen when in full production requires food which is easily assimilated, therefore the ground oat would be of greater value to the heavy producer than the whole oat.

What perhaps we do not distinguish is between something which is difficult of digestion and something which is indigestible.

There would be no object in feeding mashes if they were not more easily digested than the whole grains.

Capt. Halnan found there was no improvement in the digestibility of woody fibre by fine grinding. I quite appreciate that point, and I cannot see how it could be, as **woody** fibre is indigestible.

WYE COLLEGE DUCK LAYING TEST, 1924-1925.

Held in conjunction with the N.U.P.S. and U.D.C., at the South-Eastern Agricultural College, Wye, Kent.

Report for Tenth Period—July 11th to August 7th, 1925.

The total number of eggs laid during this period has been 685, giving an average per bird of 4.5. The total number of eggs laid since the commencement of the test has been 21,436, which gives an average per bird of 141.02 eggs in the 280 days.

Health.—One bird died on the last day of this period, otherwise health has been good. Moulting is still prevalent, but a large number of the birds have completed the change of feathers, and in some cases have recommenced laying.

Positions.—The leading position in the whole test is held by Miss Harrison Bell's Pen No. 11 (Khaki-Campbells), average to date 189.2 first-grade eggs. Capt. R. A. Long's Pen No. 1 of the same breed being second with an average to date of 180 first-grade eggs.

The highest individual duck records are as follows:—

1st, Miss Harrison Bell's Khaki-Campbell Duck No 54, 228 pts.; 2nd, Capt. R. A. Long's Khaki-Campbell Duck No. 5, 223, and Mrs. M. A. Gibson's Khaki-Campbell Duck No. 44, 223; 3rd, Miss Harrison Bell's Khaki-Campbell Duck No. 51, 222.

Breed Average to Date.—59 Khaki-Campbells, average 154.6; 44 Indian Runners, 133.2; 19 Buff Orpingtons, 104.2; 30 Magpies, 138.9; all the birds, 141.02

The leading pens in the Breed Sections are:—

Khaki-Campbells.—1st, Miss Harrison Bell's Pen No. 11, 946 pts.; 2nd, Capt. R. A. Long's Pen No. 1, 900.

Indian Runners.—1st, Mr. W. R. Partridge's Pen No. 19 (W.), 873; 2nd, Messrs. R. A. and A. M. Johnson's Pen No. 13 (W.), 759.

Buff Orpingtons.—1st, Capt. W. O'G. Cochrane's Pen No. 22, 650; 2nd Mr. C. C. Chittenden's Pen No. 24, 439.

Magpies.—1st, Mr. C. N. Goode's Pen No 25 (B. and W.), 749; 2nd, Mr. F. Boothroyd's Pen No. 27 (B. and W.), 583.

Competitors and others may visit the Test on Wednesdays by appointment only.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

"Regular Reader" (Ipswich) writes that he has three strains, Black Leghorns, R.I. Reds and Sussex, and the two latter have what appears to him to be a cold. They run at the nose, the mouth is quite clean, but the throats have an "in-and-out" movement when breathing, and the head goes dull and white. It does not seem to affect their progress, as one of the birds laid its first egg on Sunday, and all the heavy breeds were hatched in March and late in April. None of the light breeds are affected.—I cannot definitely say what is the matter with my correspondent's birds, but it is certainly advisable he should take precautions and isolate all those which exhibit these symptoms. He has examined the mouth, but I am doubtful whether his examination has been careful enough, and it would be wise to call in an expert and see whether they are suffering from diphtheric roup or not. He would be well advised to see that the nostrils are kept perfectly clear. This can be managed by holding the bird's beak, over the nostrils, in a strong solution of permanganate of potash, and at the same time give sulphate of copper in the drinking water at the following rate: Dissolve four ounces of powdered sulphate of copper in a quart of water, and add one ounce of the solution to every gallon of drinking water, and allow the birds nothing else to drink.

V. R. N. (Eastbourne) has just started poultry-keeping in a small way, and has 40 White Wyandotte pullets. He is feeding on my formula:—2 lbs. bran, 4 middlings, 2 maize meal, ½ soya bean meal, and ½ meat and bone meal. His egg average has just fallen, or rather gradually fallen, from 28 to 15, though some of the birds are casting their feathers. They have a run over an acre of grass land, and in a very exposed position; when there is a wind, it is nearly always gale force. My correspondent wants to know now whether it is necessary to alter the mash in view of the fact that some of them are moulting.—No, I would not alter the mash or make any change whatever unless they are inclined to hang in the moult. Birds in good condition do not want their mash altered because they are moulting. Supply them with plenty of fresh green food. As they were selected pullets in the first place, my correspondent proposes to get four or five individually bred cockerels to mate with them. He also has 17 Light Sussex pullets and about 40 of this year's March hatched Wyandottes. Someone has told him that where dry mash is fed grain should not be fed in the evening, but early in the morning, and an occasional scratch feed at mid-day. That is incorrect. The scratch feed should be given to the birds when they come off the perch, the mash hoppers opened an hour afterwards, and a heavy feed of grain given as the last feed. This is most important during the short winter days. As my correspondent wants to become a member of the S.P.B.A., full particulars have been sent him under separate cover. I cannot answer the remaining part of his letter until he becomes a member.

"Member" (Fetcham) asks the following questions:—"When birds show signs of being what I consider over-fat—namely, their combs begin to lose their bright redness and the tips go blue—do you think it a good plan to starve them for 24 hours, or to only reduce the quantity of the food for three or four days, reducing the protein proportion mostly, or what would you advise?"—My correspondent does not understand the fact that a pullet losing the bright red in her comb is certainly not an indication that she is over-fat. When a bird is coming into lay the ovary is freely supplied with blood, and my correspondent should understand that the comb and wattles, which are the secondary sexual organs, very quickly respond to the condition of the ovary. As a bird is going out of lay the comb becomes duller in colour, and at once shrivels up. Black tips to the comb is generally an indication of an excessive amount of animal food being fed. If a bird was over-fat I would not reduce the protein proportion mostly, but the carbo-hydrates and fats. The best way to reduce the fat, presuming the birds are in such a condition, is to give plenty of scratching exercise in deep litter. His suggested methods are not good ones at all, and it would be far better to modify his mash, and see that there was not an excess of fatty foods than to starve the birds.

POST-MORTEMS.

D. G. R. The post-mortem examination of the W. Leghorn pullet, hatched April 17th, showed that she was affected with Coccidiosis in the acute form. The number of oocysts per field of the microscope was truly remarkable, and shows, of course, that she was heavily infested. I should advise the usual catechu treatment, but, above all, the thorough disinfection of the floors of the houses every other day, great numbers of the organisms being destroyed by so doing, before they develop into their most dangerous stage. Judging from the ever-increasing numbers of birds about this age and older, the view that the natural resistance to this diseases is greatly increased as the bir grows older, will have to be modified; in fact, i looks as if that, as the trouble becomes more pre valent and established in this country, that th natural resistance is becoming lowered, and tha it will be only a matter of time before adult bird will fall victims, as in the case of turkeys, peafowl and gallenae.

W. A. T. This was a well-marked case of fow typhoid, which is a contagious disease. Th jaundice is due to the catarrhal condition of th small intestine extending to and obstructing th bile duct, and also to the alterations in th structure of the liver itself. Affected birds shoul be isolated and the premises thoroughly disin fected at short intervals, the litter and dropping being destroyed by burning. The incontact should be given drinking water medicated wit sulpho-carbolate of zinc, 15 grains to the gallo and this also should be before the isolated bir continually. Birds obviously affected should b destroyed and the bodies burned, as treatment ha little effect when once the disease has become full established.

THE LANCASHIRE UTILITY POULTRY SOCIETY.

INTERNATIONAL EGG-LAYING TEST, 1924/25.

TENTH MONTH REPORT (June 27th to July 24th).

A good average yield of eggs has been maintained during t above period, about 50 per cent. daily throughout the wh flock, light breeds particularly doing well; the heavy bre suffering through broodiness.

A good many birds are beginning to moult, but still conti laying.

The birds are in good health and condition.

The following is a list of the leading pens and individ birds for the month in the number of eggs laid, which aver 21 eggs per bird per pen: individual birds making up to per bird. Figures are Points for Month and Points to D respectively:—

SUMMARY OF LEADING PENS.

Large Breeders....Section 1.—W. Crabtree, Twiston, 151, 1 F. Snowden, Cowling, 162, 1779; R. Marshall, Forton, 181, 17

......**Large Breeders.—Section 2.**—J. R. Hull, Thornton-le-Fylde, 1695; F. Harvey, Bretherton, 125, 1603; G. H. Myersco Grimsargh, 175, 1705.

Large Breeders.—Section 3.—F. R. Welch, Bewdley, 155, 1 W. B. Bradley, Broughton, 151, 1538; W. Hamnett, Blackp 88, 1370.

Large Breeders.—Section 4.—F Snowden, Cowling, 232. 1 J. Thompson, Shrewsbury, 215. 1904; Allen Bros., Harrog 216, 1885.

Large Breeders.—Section 5.—R. Rodwell, Nelson, 161, 1 S. Street-Porter, Ely, 145, 1684; G. B. Metaclfe, Lechlade, 178,

Small Breeders.—Section 6.—J. W. Lodge, Holmfirth, 109, P. H. Sephton, Rufford, 93, 928; J. J. Rawlinson, Brindle, 99, 9

Small Breeders.—Section 7.—T. Lumb, Hebden Bridge, 81, G. E. Marsden, Lostock Hall, 81, 872; W. H. Fletcher, W plumpton, 74, 814.

Small Breeders.—Section 8.—T. Rossall-Sandford, Shrewsb 50, 876; Col. S. Sandbach, Abergele, 69, 686; W. J. King, Lean ton Spa, 68, 598.

Small Breeders.—Section 9.—F. F. Fisher, Tarleton, 113, G. W. Sutcliffe, Hebden Bridge, 100, 976; J. McKechnie, Tarl 110, 991.

(Continued at Foot of Column Next Page).

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

HOW IT IS DONE.

The following is an extract from a letter received from one of our members this morning:—

"I was in conversation with a poultry farmer who said that he was using a mash of your formula, and his hens were laying splendidly. He did not say the composition of it; he remarked that he had 'licence' to sell it, and the price was 22s. 6d. cwt. There is a vast difference between this and the price in this week's 'Eggs,' namely 12s. per cwt."

I may say here that the man in question has had no licence to sell any formula of mine. No licences have ever been issued, and there is nothing to prevent anyone who wishes to do so taking a formula from these columns, making it up and selling it. Who the person in question is I do not know, but the price, 22s. 6d. per cwt., might almost be termed fraudulent. No formula that I have ever given would cost anything approaching this, and this particular personage must be making nearly 100 per cent. profit.

The prices of mashes for this week are:—

LONDON (per Ton):

LAYERS' MASH	£11 10 0
GROWERS' MASH	£11 10 0
BREEDERS' MASH	£12 5 0
CHICK MASH	£12 10 0

The minimum quantity that can be supplied is 5 cwt.

Will readers please note that we are only giving London prices; that there are slight fluctuations in different areas; in some areas the prices are slightly higher, in others lower.

I would again say that orders will be supplied from the nearest railway station, so that the lowest possible cost for freightage may be incurred.

The scheme has now fairly "caught on," and in two posts orders for over 24 tons of food have been received. In addition to this members are expressing themselves highly gratified with the quality of the mashes supplied, which, as I have said previously, challenges comparison with any proprietary mashes which are sold at double the price. In fact, equal to the best of them, and superior to the greater number.

On Friday two members called upon me, and, in connection with the Food Scheme, asked if it was really any advantage to the Association or whether any loss would be sustained if they purchased their foodstuffs from their local corn merchant in future? In explanation they told me that previous to the S.P.B.A. Food Scheme their local merchant had been very independent, prices were high and quality inferior, but after their purchase through the S.P.B.A. he came crawling to them (I am using the term they employed), and offered them prices so much lower and of such greatly improved quality that it paid them to buy from him instead of through the S.P.B.A. because of the cost of carriage to their particular district, and cartage from the station.

We have had dozens of letters since the inauguration of the scheme, in which members have made the same statement.

We have a long way to go yet to perfect the scheme, and are always open to receive suggestions, but for a start I think we have succeeded remarkably well.

There is no advantage whatever to the Association. The Council are only trying to assist those members who have difficulty in obtaining reliable foods at reasonable prices.

There are some districts where, for local reasons, we could not possibly supply foodstuffs more cheaply than members are able to obtain them, and each must judge for himself whether it is more advantageous to buy locally or to buy through the S.P.B.A. There are a few members who have been buying quite reasonably because they are fortunately situated. These it is impossible for us to help, although many of them think we should be able to do so. It is the many who, owing to local conditions, are unable to buy at reasonable prices, that the Council is desirous of assisting.

Small Breeders.—Section 10.—W. A. Lansley, Whitchurch, 111, 1030; O. Rawlinson, Waverton, 83, 832; J. H. Hodgkinson, St. Ives, 93, 659.

Small Breeders.—Section 11.—Guy Mart, New Longton, 72, 775; Eliz. Priestley, Oxford, 74, 763; J. B. Porter, Fleetwood, 92, 727.

Single Bird.—Section 12.—Heavy.—J. R. Hull, Thornton-le-Fylde, 21, 226; J. Rainford, Penwortham, 21, 217; Mrs. M. Rogers, Hurstpierpoint, 21, 198.

Single Bird.—Section 13.—Light.—S. J, Parsons, Musbury, 23, 221; F. Snowden, Cowling, 24, 208; R. H. Fryers, Bradley, 21, 198.

Novice Breeders.—Section 14.—Heavy.—Miss Walker, Hothersall, 94, 905; W. Ellwood, Galgate, 77, 766; R. Hargreaves, Barton, 77, 776.

Novice Breeders.—Section 15.—Light.—W. Ellwood, Galgate, 106, 953; R. Bradley, Hutton, 90, 877; A. V. Wallis, Oxon, 90, 899.

SIXTH MIDLAND LAYING TEST.

LEADING PENS IN EACH SECTION.

Tenth Month ended August the 9th, 1925 (280 Days). (Four Birds per pen).

Figures are Points to date

White Leghorns.—A. Snowden, Crosshills, Yorks, 701; A. Pickard, Chilvers Coton, Nuneaton, 710; C. J. Ashton, Hathern, near Loughborough, 715.

White Wyandottes.—M. F. Phelan, Northam, N. Devon, 710; Misses Argles, Alton, Hants, 690; Fowler Bros., Earlswood, Birmingham, 681.

R.I. Reds.—K. A Crawford, Dilham, Norwich, 655; L. A. Cooper, Footherley, near Lichfield, 667; Mrs. Athol Stuart, Boxmoor, Herts., 633

Light Sussex.—F. R. Welch, Bewdley, 642; Colonel A. Dugdale, Moreton-on-Marsh, 625; W. H. Brady, Penmaenmawr, 624.

A.O.V. Light Breed.—E. Thomas, Satrouville, France (W. la Br.), 590; G. H. Rayner, Grantham (B.L.), 555; R. A. Fawssett, New Radnor (B.L.), 541.

A.O.V. Heavy Breed.—H W. Gee, Lickeys, Bromsgrove (Barn.), 595; J. Gordon Herbert, Nement (Barn.), 494; F. R. Welch, Bewdley (Bf.R.), 478.

Single Bird Section.—F. A. Ramm, Nuneaton (B.L.), 195; J Small, Edgbaston, Birmingham (B.L.), 176; F. Nicholls, Alvechurch, Birmingham (W.W.), 176.

Gradually the Sixth Midland Test is nearing its close, and August the 9th saw the completion of the tenth month.

From the above it will be noted that there is very little variation in the positions of the pens struggling for the leading positions.

The stock are in first-class condition, and egg production is being well maintained. There are still a few broodies among the heavy breeds, but these are gradually diminishing. A few birds are now commencing to moult.

The runs look greener and fresher than they have ever looked, and everything augurs for a good ending.

Feeding and management is carried out on similar lines to last month.

The general health of the stock for the past month has been very good, and there are only two deaths to report, these being Nos 443 and 449. Both bodies were sent to the Ministry of Agriculture for post-mortem, the reports being as follows:—No. 443: Ruptured oviduct. A quantity of degenerated egg yolk was present in the abdominal cavity. No. 449: Generalised Tuberculosis.

LIST OF SUBSCRIBERS TO MR. TOM NEWMAN'S PRESENTATION ON THE OCCASION OF HIS MARRIAGE.

In the following list it is just possible that some names of subscribers to this presentation have been inadvertently omitted. If this is so, our President desires to tender her apologises. Should there be any, and the subscribers will write to her, their names will be published in a supplementary list. Delay in the publication of this list has been caused by the fact that subscriptions have been received from all parts of the world—many as recently as last week :—

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F. Lawrence Talbot; Miss R. K. Tallis; Messrs. Tansy Brothers; Mrs. M. L. Tarran; Miss M. E. Tasker; Mrs. T. A. Tatton; Dr. H. Bell Tawse; Messrs. H. Taylor and Son; James W. Taylor; R. C. Taylor; William Taylor; E. Tebble; Watkin Temple; Capt. R. C. Thomas; Robert Edward Thomas; Mrs. F. Thompson; Mrs. J. A. Thompson; R. Percy Thomson; J. W. Thornley; Miss Evelyn Thurlow; H. Tingle; K. Tinton; Com. A. Grendon Tippet; R. H. Tippett; Francis Todd; Stanley C. Tomkins; Miss Tomkinson; Felix C. Tomlinson; G. A. Tomlinson; H. Tomlinson; C. E. Tompkins; G. B. Tootal; W. C. Tooth; T. W. Toovey; E. A. Topp; Miss D. Toulmin; James Towers; Frank Townend; Guy Tresham; Com. H. Trenson; Miss Trotter; Mrs. Tudor; Capt. H. G. Tunstill; James W. Turfus; F. H. Turnbull; Miss Flora Turner; G. Walton Turner; J. Turner; Miss M. C. Turner; Miss M. E. Turner; Miss M. M. Turner; S. P. C. Turner; H. W. Tutton; Jess Tyldesley.

Capt. E. J. Vardon; Miss Vassie; M. E. A. Beavan Vaughan; Miss T. Vawdry; E. Venis; S. Venn; H. Verden; Mrs. E. M. Vessey; C. W. Vickers; Mrs. T. Vowles; R. S. Vyle.

L. H. Wace; J. Waddell; Lt.-Col. W. E. Wailes; Miss E. M. Waind; T. J. Wainwright; Mrs. T. J. Wainwright; F. W. Wait; D. Wake; J. Wakefield; G. E. Wakelin; Mrs. D. J. Walker; Harold Walker; Mrs. G. M. Walker; James G. Walker; T. W. Walker; Mrs. Norton Walker; Miss J. A. Wallace; Miss M. Wallis; W. Walter; Miss H. Walton; A. Houstonne Ward; A. Wardle; Mrs. A. Warner; M. Warren; W. O. G. Warwick; Yoneo Watanabe; Miss E. F. Waters; Miss E. N. Watkin; Edgar Watson; William Watson; W. Watson; Mrs. Wolston Watt; A. G. Watts; Miss D. Webb; P. Webb; Mrs. T. Webb; Thomas Webb; James Webster; Richard Webster; W. Alan Webster; F. W. Weeks; Charles H. Welch; F. A. Welch; Miss I. Weld; Mrs. K. Weldhen; W. J. Welford; Mrs. W. C. Weller; Fred Wells; Robert West; A. Westerby; G. Westerman; F. Western; J. H. Weston; A. R. Wheatley; F. W. Wheeler; A. Wheelwright; W. J. Whetnall; Miss A. L. Whitbread; C. White; Mrs. C. E. T. White; Mrs. M. White; White, Tomkins and Courage; J. Whitehead; R. B. Whitehead; F. H. Whiteley; P. S. N. Whitlow; Mrs. Woolryche-Whitmore; B. Whittlestone; Miss Whyte; Livingstone Whyte; C. Widdas; Miss M. B. Wigan; A. Wiggins; A. L. Wiggins; Miss Wigram; R. F. E. Wild; Harry Wildman; H. Wilkinson; Rev. L. C. Green Wilkinson; E. L. Williams; Major G. T. Williams; Miss H. McC. Williams; J. Williams; Mrs. J. W. Williams; Capt. L. Williams; Richard J. Willliams; W. H. Williams; Miss Widger Williams; Mrs. G. Williamson; L. V. Willis; Mrs. G. M. Willshire; Miss J. Willsteed; Lady Bromley Wilson; M. J. Wilson; W. Wilson; Major W. Hayland Wilson; Capt. E. Wimberley; E. C. Winch; H. W. Windle; Miss J. Wingfield; James Winskill; Miss H. Winton; R. H. D. Winton; Rev. F. G. Witt; Alfred Wood; Arthur E. Wood; A. P. Lomax Wood; H. S. Wood; James S. Wood; W. J. Woodcock; Miss M. B. F. Woodhouse; W. Woodhouse; A. H. Woods; Miss F. M. Woods; Miss J. G. W. Woods; Miss N. E. Woods; C. E. Woodward; B. Woolacot; Mrs. Worssam; R. J. Worssam; G. N. Worters; Charles E. Worthington; Miss A. B. Wright; C. Wright; D. P. Wright; M. C. Wright; Major R. S. Wright; T. Wright; J. E. Wrigley.

Miss M. K. E. Yeats; Miss I. Yorke; C. G. Young, Senr.; Donald J. Young; John H. Young; W. R. Younger.

"DAILY MAIL" EGG-LAYING TEST OF FIRST-CROSS PULLETS, 1924-25.

Promoted by "The Daily Mail," in co-operation with London an North-Eastern Railway Company. Held at Bentley, Suffolk.

Report for Tenth Month—27th June to 24th July, 1925.

It was not until quite the close of the month under repor that the long continued drought broke, and the much-neede rains came. The immediate effect of the change was an increas in the average size of the eggs, as well as a slight rise in th curve of production, which had previously been falling steadily

Under the conditions prevailing throughout the month th average of 15.79 eggs per bird may be regarded as very satisfactory. This brings the flock average for the 40 weeks to dat to 161.24 eggs per bird.

Broodiness was not so prevalent as during the previou month—only 143 birds passing through the broody coops as compared with 246

Moulting, however, was more in evidence, though the numbe affected was not so great as was to be expected in view of th extremely hot weather—in fact it was rather below the norma for the time of the year.

The general health of the flock was again very good.

J. N. LEIGH.

EGG PRODUCTION OF LEADING PENS.
(Seven Pullets).

Figures are total points to date.

Section 1. White Leghorns x White Wyandottes.—F. W. Barley, King's Norton, Birmingham, 1410; James M. Abbott, Hoebridge, Old Woking, 1354; Henry Sutton and Sons, Little Hoole near Preston, 1260; Walter Crabtree, Clitheroe, Lancs., 1235; Mrs W. Crabtree, Clitheroe, Lancs., 1223.

Section 2. Black Leghorns x Rhode Island Reds. — Wilso Beattie, Rothersthorpe, Northants, 1228; J. Ashworth, Withnell near Chorley, 1203; M. E. and A Robinson, Kingswood, Bawtry Yorks., 1174; P. K. Berry, Market Harboro', 1149; G B. Metcalfe Claydon Farm, Lechlade, 1107; Mrs. F. H. Toone, Copston, Hin ley, 1107.

Section 3. Any other First Cross.—Mrs. W. Crabtree, Clitheroe Lancs 1255; H. D. Barley, King's Norton, Birmingham, 1247 Edward Watkins, Cross-in-Hand, Sussex, 1246; Walter Crabtree Clitheroe, Lancs., 1199; C. W. Farmer, Romsley, Halesowen Worcester, 1113.

Section 4 Any Cross showing Sex-Linked Inheritance.—Hug Sowerby, Caistor, Lincs., 1378; J. Parkin, New Hulton, Kendal 1124; A Mansell, Kingston Stert, near Thame, 1093; P. E. White Market Drayton, 1088; Charles R. Hall, Coulsdon, Surrey, 1083.

Bacillary White Diarrhoea

Its Control and Eradication.

By **T. M. DOYLE, F.R.C.V.S., D.V.S.M.**

Continued from Page 141.

CAN HEALTHY ADULT FOWLS CONTRACT THE DISEASE FROM "CARRIERS?"

This is an important point, as on it depends, to a ırge extent, the value of the agglutination test as a ıeans of eradicating the disease.

If fowls only contract the disease in the chick stage, ıe test at about six months of age would detect all ırriers, but if healthy adults become infected from ıntact with carriers, two or more tests will be neces- ıry. The reason being that in recently infected birds ıe disease will not be sufficiently advanced to give ıaction, and a second test will be necessary after an ıterval of one month to detect those infected birds hich failed to react to the first test.

In 1919 Rettger and his co-workers investigated this ıestion, and concluded that transmission of infection om hen to hen through infected litter or direct con- ct was rare. In their experiments they used artifi- ally-infected fowls.

In view of the importance of this question the fol- wing experiment was carried out:—Eighty fowls, ty naturally-infected carriers, and thirty healthy con- ols, were housed together for a period of one year. ıis represented a flock infection of 62 per cent., hich is far heavier than that generally met with ıder field conditions. The average flock infection in is country is between 10 and 15 per cent.

The birds were divided into groups, and kept in ıall houses, which were only cleaned out at long tervals, so as to allow every opportunity of infection king place. The experiment was controlled by ınthly agglutination tests. In no case did any of the althy controls show the slightest infection.

The testing of infected flocks in the field, both in is country and in America, has, however, given fferent results to those of the laboratory experi- ents.

In America, out of 13,000 hens tested, the number reactors to a first test varied between 10 and 40 per nt., and from nil to 25 per cent reacted to a second st. In this country our field tests have given nilar results, and in second tests the reactors have ried between nil. and 20 per cent. The 20 per cent. an exceptional figure; the first test of this flock owed a 40 per cent. infection.

As a general rule a second test shows one or two r cent. of reactors, and a third test one or two in the ıole flock. The number of birds which react to a ıond test appears to be in direct proportion to the ıount of infection originally present in the flock.

In some cases one test has been sufficient to minate all "carriers," and a high percentage of althy chicks has been hatched from the tested ck.

The adult fowl is extremely resistant to infection with the *B. pullorum*, and it is probable that under natural conditions the organism is ingested in such minute quantities that the minimal infecting dose is not achieved, and is quickly overcome by the body defences.

When ground is grossly contaminated, as occurs when diseased chicks have been running on it, it is probable that large doses of the organism are taken in and the natural resistance is broken down and the bird infected.

From the field experiments it may be concluded that infection between diseased and healthy adults does occur, and that it is due to gross contamination of the ground.

It is, therefore, evident that "carriers" are a larger factor in the spread of B.W.D. than is at present realised, and are probably also the cause of an appreciable number of cases of unknown origin.

The negative results obtained in the laboratory experiments were probably brought about by insufficient ground infection; the good structure of the poultry houses, and the excellent lighting arrangements, etc., would account in no small measure for the failure of the organism to establish itself. Progressive infection between adults explain those cases in which the agglutination test fails to eradicate the disease, and the necessity for repeated tests. If, however, the test is employed, in conjunction with other methods, which will be discussed later, there is little difficulty in stamping out the infection.

INOCULATION AGAINST B.W.D.

The question is often asked as to the possibility of protecting chicks by means of a vaccine or anti-serum.

Vaccines do not confer immediate protection when introduced into the body. There is a period after inoculation, known as the negative phase, during which susceptibility is increased. The negative phase lasts from four to five days.

Chicks are, as you know, most susceptible to B.W.D. during the first few days of life. A vaccine, therefore, would not only fail to protect them during the danger period, but would actually render them more liable to contract the disease.

An anti-serum against a disease is produced by the repeated injections of the causal organism into a suitable animal. The animal is then bled, and the serum collected. As it contains anti-bodies against the organism with which it has been prepared, it gives an immediate protection, but of short duration. Infection is not always prevented by the use of serum, it may be only modified, and an apparently recovered animal may become a "carrier." The use of serum, therefore, may lower the mortality, but increase the number of "carriers." The strongest argument against its use is that the inoculation of newly-hatched chicks is not a practicable proposition. They are far too delicate and fragile to permit of such intervention as a routine measure.

CONTROL AND ERADICATION.

There are certain factors which are of great assistance in controlling poultry diseases, and of which full advantage should be taken. These are:—

(1) The small value of the individual fowl. This permits of the elimination of diseased birds without involving the owner in any serious expense, and on this account it is a sound policy, at the first appearance of a contagious disease, to destroy the affected birds, and prevent the spread of infection.

(2) The short average life of the fowl facilitates the replacement of a diseased flock with healthy young birds in a short space of time.

These two factors are particularly valuable in dealing with the disease in question.

If B.W.D. was made a notifiable disease, its eradication would not present any great difficulties, and could be brought about in a comparatively short time. The industry is, however, so widespread, and poultry and poultry-keepers are so numerous, that the expense entailed in the carrying out of such a policy would be prohibitive. The control and eradication of the disease must depend, therefore, on the voluntary efforts of poultry farmers themselves.

Measures for dealing with outbreaks may be divided into two parts:—

(1) The elimination of "carrier" birds by the agglutination test;

(3) The building up of a healthy flock.

As soon as the disease has been diagnosed by a bacteriological examination, the stock birds should be tested, and reactors immediately removed from the flock.

We have already pointed out that reactors should be disposed of because they are the principal means by which the infection is transmitted, and also on account of their low egg production. The remainder of the flock should be moved to clean ground to prevent further cases arising from the contaminated runs. The infected ground should be heavily limed and left vacant for some months.

As one test is unlikely to detect all "carriers," it is advisable to divide the flock into groups, and to mark the eggs from each group. In the event of further outbreaks occurring, it is possible by this procedure to limit the number of birds which will require to be retested.

The size of a group will depend on the egg capacity of the incubators employed, and in a general way it should be so arranged that the eggs from one or two groups will be sufficient to fill one incubator within reasonable time.

It must be remembered that the agglutination test, although very reliable, is too expensive and laborious to be solely depended upon for the eradication of the disease. It should be regarded as a temporary measure to allow of the carrying on of breeding operations with an infected flock until such time as this can be replaced by healthy young birds.

THE BUILDING UP OF A HEALTHY FLOCK.

Attempts to cure affected chicks are useless and inadvisable. In spite of the many so-called "cures" on the market, there is no method of treatment yet discovered which is of the slightest value. Furthermore, the fact that those which recover are likely to harbour the causal agent, and are the potential source of future
outbreaks, is a strong argument against the polic
of treatment. Under no circumstances, whatever
should survivors be used for breeding, because, as w
have already shown, more than half of them are likel
to be "carriers," and will be the means of startin
fresh outbreaks.

The practice of breeding from survivors may b
held to account in a large measure for the presen
widespread distribution of the disease, and for the lac
of success which efforts at eradication have met with

If the number of chicks which survive an outbrea
is small, they should be destroyed. If, however, th
number is considerable, to destroy them might caus
considerable financial loss. These should then b
isolated and disposed of for table purposes.

To go to the expense and labour of keeping disease
chickens for six months or longer, and to endeavou
then to weed them out by means of expensive tests, i
not a sound policy, and it has failed to achieve an
success in those countries in which it has been tried

The agglutination test can also be employed for th
protection of healthy flocks, and I would suggest, i
view of the prevalence of this disease, to buy all ne
birds subject to passing it. The cost is insignifican
compared with the valuable protection which it affords

The measures which are recommended in this pape
are practical and economical, and, if efficiently carrie
out, will bring about the total eradication of th
disease from infected flocks.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impressio
that they must necessarily be scientists, pedigre
breeders, or farmers on a large scale to rende
themselves eligible for membership of the S.P.B.A
This idea is quite incorrect. The S.P.B.A. is ou
to assist all grades of poultry-keepers, from th
proprietor of the 10,000-hen farm to the intensivis
with his dozen or so birds; all are entitled to equa
benefits. The Five Shilling subscription bring
with it many advantages, namely: Free Advice b
Post, a Copy of the Annual Register, the Benefit
of the Discount System, and many othe
advantages too numerous to mention here. Yo
should write for full particulars to the Secretar
TOM NEWMAN, The Beeches, Rudgwick
Horsham, Sussex. The financial year begins o
1st September.

CHESHIRE COUNTY COUNCIL EGG-LAYING COMPETITION
SINGLE BIRD TEST.

Report for Tenth Month—24th June to 21st July.

The flock average for the month is 14 eggs per bird, again
16.25 last month. The average for the light breeds is 17.1, a
for the heavy breeds 11.4 per bird. Two birds did not lay.

During the period 33 birds have been broody. No. 27 bi
early in the month died from peritonitis, caused by ruptu
of oviduct.

Figures are Eggs for Month and Total Points to date respectivel

Light Breeds.—W. J. Fletcher (W.L.), 17, 1562; Campbell She
(W.L.), 23, 1500; J. Mason (W.L.), 2, 1448; E. Harrison (W.L.),
1426; A. J. Milne (W.L.), 21, 1411; A. Tobler (W.L.), 20, 1400.

Heavy Breeds.—W. T. Griffiths (W.W.), 16, 1441; Liverpool Sa
torium, Kingswood (L.S.), 9, 1437; Mrs. Garnett (Bf.Rk.), 12, 14
Tansey Bros. (R.I.R.), 12, 1390; E. Carter (R.I.R.), 16, 1389;
Paterson (Bf.Orp.), 10, 1307.

Correspondence.

O-OPERATIVE POULTRY PRODUCTS, LTD.

Dear Sir,—One is rather amazed to read in urrent numbers of "Eggs" letters from people vho are personally shareholders in Co-operative oultry Products, Ltd., decrying that very young oncern.

Surely nowhere but in the poultry industry are here to be found shareholders who will write to he Press discounting the very Society they have elped to create.

Do all these correspondents imagine they know etter than those in charge, how the Society can est be run? Why not give it a chance?

If members have criticisms to make the General leetings are open to them, and suggestions are, believe, gladly received.

Those who read "Eggs" regularly should now as much of Mr. W. Hall's farm as he knows imself, and they will probably agree with him hat they do not see the use of him being a ember, but—there are others.

Let the Board get on with the job and don't eep them answering "self-evident" questions in e Press, is an appeal that seems almost ecessary.

No, I am not on the Board, merely a humble umber something! (which I never can remember).

I am, Sir, your faithfully,

H. MELVILLE LEIGHTON (Capt.).

O-OPERATIVE POULTRY PRODUCTS, LTD.

Dear Mr. Newman,—The correspondence you ve published from critics of the above Society is rtainly of interest to the management, as show- g the attitude of certain people towards co- eration.

The Society held on July 28th last its annual neral meeting, and, as chairman on that occa- n, I asked for any questions and criticisms on e work that had been done, but not one of your rrespondents raised the point upon which he w writes to you. Surely if they felt so strongly, true co-operators—if not as shareholders—that s the time to raise such matters.

As there are many points raised by your corres- ndents which may mislead those who are not mbers of Co-operative Poultry Products, Ltd., would appear to be only fair to the Society for u to give the report of the annual general meet- where these matters are dealt with in detail. e General Manager would be pleased to send a py to anyone who is interested.

Yours sincerely,

P. HEDWORTH FOULKES.

summary of the Report is given in another column.—(Ed.)

CO-OPERATIVE POULTRY PRODUCTS CO.'S PRICES.

Dear Sir,—It may interest others to know what prices have been paid for chicken sent to this Company. The second and third weeks in July Rhode Island cockerels that had been specially fed with fattening mash for two weeks were dispatched to Virginia Water. Their weights varied from 3 lbs. to just under 4 lbs., and the prices that were paid was from 2s. 5d. to 3s. 6d. each, and very few at the latter price. Leghorn poussins weighing just on 1 lb. fetched 5d., 6d., and a few at 8d. each. Extra to this was deducted from the cheque 10 per cent. commission, carriage and cartage, postages and cost of cheques, and on top of this we paid considerably more for carriage to Virginia Water than to the London Markets. During the past week we have sent birds alive to the London Markets, the same size as those sent to Virginia Water in July, and none fetched lower than 3s. 6d., and the costs by way of freightage and commission was far less. We have never been satisfied with the London Markets for this kind of produce, but never have we received such appalling prices as this Company at Virginia Water has doled out.

It was understood that an enormous fattening plant was installed with a view to grading birds and finishing them off to be sold to big consumers, instead of which it would appear that they are merely doing what we ourselves could do by sending to a local market and relying upon philanthropists in the poultry industry to keep them going. Then we are told that we will not support the Co-operative system. Truly, the Lord helps those who help themselves!

ANOTHER SUFFERER.

CO-OPERATIVE POULTRY PRODUCTS, LTD.

Dear Sir,—No doubt C.P.P., Ltd., can stick up for themselves, and it is no part of my object in writing this to defend them nor to criticise them, though I would rather like to see some one within "Eggs" who knows something about their doings, who defends them, and I think it would be a help if some sort of account of the volume of their business were published and the prices paid, etc. However, all that is somewhat beside the point of this letter.

Now what I do wish to write about is this. Here we have an apparently struggling organisation, whose object it is to further the interests of the egg-producing industry; at least that section of it which belongs to C.P.P., Ltd. It seems to me that a great deal of this criticism is deplorable. Surely we producers should do all we can to puff our Co-operative Society and do all in our power to make a huge success of it? How can we keep out all those foreign eggs if we do not make some sort of attempt to co-operate?

We are like a barbed wire fence with no wire, only barbs in it, and the organised and co-operative foreigner kicks the loose barbs out of the way—walks in and takes **our** market. A few of the barbs no doubt get there, but a good many get lost on the way.

Now what about having a good strong wire to hold us together? Is it one of those things that cannot be done in England, or is it that C.P.P., Ltd., are not the people to do it?

How I see it is like this. The established egg farmer has his connection which he has built up through his own efforts, and he is not going to sacrifice that for any patriotic (in its narrowest or widest sense) reason, so he has no use for a Co-operative Society. The small man, or the beginner, is he who would be most benefited by a really good Co-operative Society, but he has neither time, money, nor influence as a rule to be of any use in pushing his society and making it a really big thing and an effective one; the result is that all these little Co-operative Societies are scarcely more than a paid job for a secretary or something of that sort, and none of them have any high politics nor aim at making the **English eggs** the **preferred eggs** at the English breakfast table. Will C.P.P., Ltd., do it? Or shall we let the Dane, the Dutchman, and the Dago go on supplying us? Is there no British industry capable of such a strong organisation that it can beat the foreigner in our own market?

Yours truly,

J. R. BRIGGS.

THE SALE OF EGGS.

Dear Sir,—If Messrs. Morton Nance, Wireless and Co., could submit their calculations to their old schoolmasters those worthy gentlemen would, I fear, see little to enthuse over. To make figures "interesting" something more is required than a knowledge of numerals and a fertile imagination.

The purely hypothetic problem propounded by Mr. Nance is very simple. The six days' layings of 400 fowls, with a 137½ eggs average per day, not per bird (this for the information of "Wireless"), at the market prices stated, results in yearly values, as follows, after cutting out odd numbers:—

4,182 doz. at 1s. 8.11d. (roughly 1/8-1/9) is £350. Deducting food, £240, we get (with apologies to "Wireless") a gross profit of £146. If we carry this to a commercial farm conclusion by deducting from the gross profit a sum equal to 3/7ths of the food cost, i.e., £87, we get a net profit of £59, which is obviously round about 3s. per bird.

How such a return would appeal to the average poultry-keeper I know not. To me it would signify a waste of useful food. If the farm were run as a "hobby" or overtime occupation, the moral responsibility would, in my opinion, be in no wise lessened thereby.

Yours faithfully,

J. WHEELOCK.

This correspondence must now cease.—(Editor.)

VENTILATION BY INDUCTION.

Dear Sir,—In your issue of August 19th a Mr. R. A. Dixon makes a personal reference to me on the above subject, and as his letter shows u a possibility of a grave misconception as to the nature of ventilation by induction, I would like, for the sake of your readers who are interested in the matter, to clear it up.

Mr. Dixon seems to object to my warning against 45 degree angle houses, and floor ventilation. Why?

If I knew who Mr. Dixon was, and the particula design of house his name is associated with, might the better be able to grasp the object o his communication, but my knowledge of the poultry industry is almost limited to the tex pages of "Eggs," as the only useful paper, an that may possibly be the reason.

He concludes that I am prejudiced against an other method of ventilation than my own.

In all fairness he is hardly justified in sayin this, for if he will refer to one of the concludin paragraphs in my article on "Health by Ventilation," he will see I ask to be "absolved fro any suggestion on my part that what has bee set out here is the last and best word on th subject."

Here are the reasons for my warning agains building Apex houses with the roof-sides at a angle of 45 degrees and floor ventilation.

When I introduced the principle, or system, ventilation by induction it was readily accepte by many whose intelligence is greater than min as being something better than modern prevai ing systems. From that time so much intere has been aroused in the possibilities of such system that enterprising poultry-keepers wrote me for working drawings and started erecting and from a knowledge of what these people alo are doing, at a rough computation, there mu already be something like thirty thousand bir accommodated in houses ventilated on th induction principle.

The very latest account I have had is of a fo thousand bird farm on which a 100 bird house w erected three months ago, and last week anoth for 500-600 birds was started. The owner is poultry-keeper of thirty-six years standing.

Then the inevitable happens. The small man facturer sees these houses going up all over th country. In sheer ignorance of the principles i volved he starts to make a cheap imitation, a as the cheapest and simplest from the point view of economy of material is that with the ro sides at an angle of 45 degrees, he produces these at small cost, and so passes out possible trouble to the small-scale struggling poultry-keeper.

We then, as pioneers of this **principle,** do not like the thought of followers who are less conversant with the technical side of the application to suffer disappointment by erecting houses of such design that there was any possibility of the **principle** being altered to distortion.

The first triangular house I built was of the 45 degrees type; three-quarters of the floor was boarded, and the remaining space on each side left open with wire netting. It was supported on six inch sleepers. The result was appalling, and as regards the induced current ventilation, it simply did not exist. I then studied the science of induction, as applied in the steam injector and the water-jet vacuum jump, and saw where I was wrong. I have no hesitation in saying that it is of the first importance that the angle contained between the sides and floor **must not be less than 50 degrees if the best results are desired.**

There are sundry other factors which make for the greatest efficiency, but which need not be included here. The matter has recently been most ably dealt with in detail in an article on "The Importance of Proper Ventilation," by an unknown writer in your issue of July 29th.

Now let it be clearly understood that I am talking of the **principle** of induction as applied to ventilation, not of methods of ventilation.

There can be no question of monopoly in nethods, but there can be, and appears to be, some grave confusion in the conception of principles.

Mr. Dixon, in referring to his own particular lesign, says:—"The birds are protected from udden draught, as the dropping boards break the urrent of air coming through the ventilation paces in the floor. . . . ."

Mr. Dixon's method of ventilation, then, is not n the **induction principle,** because **where there is elf-generated induction there cannot be draught;** is against all the natural laws which are arnessed to provide the system.

With regard to floor ventilation. There are ertain refinements of adjustment in the relative reas of air inlets and foul gas outlets required get the best results out of the system, and ther considerations of too lengthy and technical nature to be included here. A few experiments ith a stove pipe, a candle, and some smoking own paper will yield a wealth of information in ese directions. But, apart from these, have we t already enough contributory causes to disease poultry without adding yet another by pulling r through, or in contact with, fouled litter?

I may say that this is one of the reasons why I ver throw grain into my laying-sleeping houses. do not like my birds to inhale the dust from ter which is even only a fortnight old.

Mr. Dixon says I am pleased with my own method. I am. I am very much in love with the results in my own practice from the application of a principle for the **induction** of air by natural laws. But let it be clearly understood that the principle can be as satisfactorily applied to span-roof houses, which type for many purposes only can be used. I have already supplied general poultry-keepers with suggestions for remodelling their span-roof houses to secure this system of ventilation.

The matter is not one of Apex houses at all, but of the successful application of a principle, so I am unable to see the reason of Mr. Dixon's criticism.

I gather that Mr. Dixon is a manufacturer of poultry houses. I am not, and therefore not commercially interested in that direction. But, owing to the heavy bombardment of applications to know where and how self-ventilating houses of the type associated with **my** name could be obtained, I had, in sheer desperation, to find a manufacturer who would be willing and **capable** of undertaking it. Believe me, it was not an easy matter. Skill in manufacture is of the greatest importance. Such a structure cannot be made in a cheap, haphazard manner; it is bound to be more costly in time and thought, and to find the manufacturer with the scientific intelligence, belief, and progressive **enthusiasm** to appreciate the necessity for all the refinements demanded was not an easy thing in these days, when manufacture and profits are so dependent on mass production.

A discriminating search of the advertisement pages of "Eggs" proved singularly fortunate in the end, and the first thing this up-to-date gentleman did was to put up a large house to **prove** it, and later others of a giant order for his own use.

I am, Sir, yours faithfully,
C. WINTHROPE SOMERVILLE.

LANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES' LAYING COMPETITION.

Held at the Lancashire County Council Farm, Hutton, under the supervision of Mr. C. H. Dobbin, the County Poultry Instructor.

All the birds are in good health. During the month W.L. No. 31 laid 25 eggs; No. 23, 24 eggs; B.L. No. 101, 24 eggs; and R.I.R. No. 88, 24 eggs. The birds are now easing up, between 50 and 60 having been broody.

ELEVENTH MONTH'S REPORT (23rd July to 19th August, 1925).

The following are the leading positions in each section, showing number of Eggs and Points for the eleven months:—

Section 1.—White Leghorns.—Large Breeders (three birds).—R. Beesley, 635, 3507; J. Booth, 644, 3468; E. Cam, 582, 3272; A. C. Harrison, 601, 3260; W. Hamnett, 540, 3080; R. Moon and Sons, 581, 2998

Section 2.—Light Breeds.—Large Breeders (three birds).—O. Rawlinson, 625, 3188; Mrs. J. H. Hill, 441, 2246; F. Lord, 439, 2102; J. P. Willacy, 415, 2076; H. Hilton, 401, 1984; W. Hamnett (1 dead), 352, 1861.

Section 3.—White Wyandottes.—Large Breeders (three birds).—C. Bates, 584, 3329; Mrs. S. Sefton, 538, 2807; W. Hamnett, 498, 2798; J. R. Dawson, 480, 2698; F. Holden, 487, 2636; A. C. Harrison, 471, 2467.

Section 4.—A.O.V. Heavy Breeds.—Large Breeders (three birds).—F. Harvey, 612, 3085; W. Weardon and Sons, 528, 2846; T. Edmundson, 501, 2773; D. Braithwaite, 457, 2619; T. Barron, 463, 2519; J Basnett (1 dead), 418, 2457

Section 1.—Light Breeds.—Small Breeders (single birds).—G. A. Wolsteinholme, 193, 1069; H. West, 194, 1060; R. Mills, 189, 1044; J. Stanley, 175, 1040; F. Wilkinson, 218, 1029; J. W. Makant, 207, 1029.

Section 2.—Heavy Breeds.—Small Breeders (single birds).—J. W. Pearson, 204, 1191; D. Braithwaite, 199, 1041; A. D. Walton, 191, 914; T. Plumb, 182, 908; T. Harrison, 169, 855; Mrs. A. J. Mellor, 159, 806.

CO-OPERATIVE POULTRY PRODUCTS, LTD.

THE SECOND ANNUAL ORDINARY GENERAL MEETING.

The Chairman (Mr. P. Hedworth Foulkes), in reply to criticism of the Society in these columns, suggested that we should publish the report of the meeting as an answer to these. This we regret, owing to its length, we are unable to do. We will, however, endeavour to summarise it, and should there be any important omission in the summary, if the Chairman or Secretary will kindly let us know, it shall be remedied.

If we might be allowed to comment on the criticism, it is to suggest that, while we feel compelled to publish this, in future it would be desirable for those who have any complaints to make to first seek an explanation from the management, and if this is not forthcoming, the columns will be open to them, and the management may be induced to reply to any such complaints in the same manner. This will at once prevent any of the small pin-pricks which are so damaging to a Society fighting to establish itself, and at the same time give fair play to the shareholders.

THE REPORT.

Of Share Capital, the position to date is that the

Number of members or shareholders	644
Total Subscribed Capital	£5823
,, Paid up	£3404 0 0
,, Uncalled	£2419 0 0

LOANS.—The Ministry of Agriculture, as the Report states, agreed to advance a loan of £3,000 upon the terms stated, and this amount has been paid over. Further application has been made, and, as a result of negotiations, the Ministry has agreed to increase the amount on the basis of £1 for each £1 of subscribed capital up to a total of £5,800. Of this amount, the Society have now received, including the above £3,000, a total sum of £5,000, and the remaining £800 will shortly be paid over as soon as the legal requirements are fulfilled. The date fixed, as the commencing date for calculating repayment and interest is March 6th, 1925, so that the first payment for Interest at 5 per cent. per annum, payable half-yearly, will be September 6th, 1927, and the first repayment of 1/26th of the total capital advanced will be March 6th, 1927.

I need hardly mention the great help that this arrangement gives to the establishment of such a business as this of yours. You will appreciate the recommendation which we made that members should take up share capital upon the basis of 10/- paid per £1 share.

While this is very satisfactory as far as it goes, I must call your attention to the fact that our original estimate was for a capital of £12,000, and our total cash capital received has been:

Paid up Capital		£3404 0 0
Ministry of Agriculture Loan ...	£5000	
Still to come	£800	
		5800 0 0
Total		£9204 0 0

Until the final completion of the equipment and the proper allocation by the auditors of the various items of expenditure to capital and trading accounts, it is quite impossible to give you definite figures of capital expenditure. It is, however, quite clear, and the Ministry of Agriculture's Committee has urged upon us the necessity of providing more **working** capital.

All business concerns must have sufficient working capital from which to trade, and if such capital is not available as share capital, it has to be obtained by loans or borrowing from the Bank. Under the terms of the Ministry's loans a first debenture is taken upon the Society's property and uncalled capital —to the extent of £5,800—so that until further subscribed capital is available we have no assets which can be put forward to the Bank.

The Board of Directors would therefore urge upon members the desirability of members increasing their share holding, or of obtaining more members in order to provide this necessary working capital. It has been suggested to me by several members that this should be done, and as a Board we should be glad if a recommendation from you that members, if not all members, should be required to subscribe on a basis of £1 share per 100 head of adult Poultry Stock. This basis has been adopted in the case of members dealing through the egg department, but has not been the case with those sending birds for sale, and in several cases members holding one or two shares have disposed of quantities of birds through the station. The average holding of share capital by members is approximately £9, or £5 paid up. But this average is raised by the larger holdings of about a dozen members with 50 to 200 shares.

You will naturally desire to know what we have in the way of capital assets, and for this purpose we have had a valuation made of the property, and the following figures have been compiled to give an approximate total to **date**:—

House, Buildings, Land, Road, and Water Supply	£8,020 0 0
Electrical Power Plant and Fittings ...	1,200 0 0
Equipment of Egg Department and Offices, Fatting Plant and Rolling Stock	911 0 0
Total ...	£10,131 0 0
Uncalled Capital ...	£2,419 0 0

The Chairman proceeded to say the aim has been to build up a trade for members by establishing a brand of eggs which shall be as well known, and as reliable as, say, the best brand of Danish or Dutch eggs. Members of the staff visited these countries to investigate marketing conditions, and the most economic means of grading and candling. On their return a egg department was adopted, and a candling plant set up Further, a trade-mark "Co-pep" has been registered.

The Society commenced trading in eggs nine months ago The total number of eggs sold during that period was 4,358,754 and the total receipts for such eggs £34,000. Prices paid t members who came in on 1st October last were the averag prices from October to July:—1st grade 2/1¾ per dozen, 2n 1/11½ per doz.

Figures show that members have received for their eggs th full price, less only 5.5 per cent. deduction for working expense and overhead charges.

Comparison is made with charges made by the Lancashir Egg Producers, the Framlingham Society, and the Anglese Egg Collecting Depot.

In the case of the first, the percentage of expenses of sale was 11.69d; the Framingham 17.9d.; and the Anglesey Collecting Depot 21.0d.

POULTRY DEPARTMENT.

This department could not be started until the end of Apr this year. Since that time some 28,000 birds have been dea with of all breeds, ages and condition. Comment is made upo the fact that there has never been a station of this type ar magnitude in the country before, and it was obvious a gre deal of experimental work had to be done.

It may be too early yet to say that the original idea of the station becoming a centre for fattening Leghorn cockerels is a mistake? But the experience gained during the past three months, of the type of bird to be disposed of, and the age at which members wish to dispose of their young cockerels, leads us o think that the benefits to be obtained are over-estimated.

The wide variation of type and quality of breeds has added o marketing difficulties, for the sales manager has not been able o sell ahead owing to his not knowing the quantities of the lifferent grades to be disposed of.

Perhaps the greatest difficulty (and it is one in which mem-ers themselves have taken the closest interest) has been the uestion of payment for birds as sent to the station.

The question of erecting a plant for producing chicken essence, otted chicken, etc., is one which requires capital, and at the moment we do not see our way to launch out. We are alive to he possibilities of the work in this direction, and certain nquiries have been made. For instance, we have ascertained hat those firms who are making chicken jelly confine their purchases almost entirely to fat old hens, and it might be well worth putting up at least an experimental plant to test the ossibility of disposing in this way of old hens.

AUCTION MART.

The Directors have made arrangements for a trial period f three months of an Auction Sale to be held weekly at Virginia Water. The fact that we have had individual buyers enquiring or produce has given us the hope that by getting these buyers own to compete against each other in open auction we shall ealise better prices on behalf of members.

Members who are sending in birds for the fattening station an feel satisfied that the prices they receive are competitive rices. We are thus taking the auction price as the basic figure or members' supplies.

A development of the auction will be the holding of stock ales from time to time, when pedigree stock can be offered nd sold between members and the general poultry-keeper, with esulting benefits to members of cash payments and wider pub-ity for their goods. For such auctions a special sale catalogue ould be compiled, and due advertisements made of the sales. he first auction was held, and members responded almost too agnificently, for over 5,200 birds were entered for sale, and 098 dozen eggs.

After paying a tribute to the staff, the Chairman formally oved the adoption of the report, which was seconded by Capt. awrence, and carried unanimously.

In answer to a question, it was stated that the prices obtained r eggs at the first auction were 1/9 to 2/- for first grade, d 1/6 to 1/9 per dozen for second grade eggs.

Col. Rendel proposed, as a method of raising capital, that a ndition of membership should depend upon the intending ember taking up capital in the proportion of £1 per hundred ad of stock birds. This was seconded by Major Ellison.

Considerable discussion ensued, and Capt. Washington prosed a method of raising capital which is carried out in Auslia with success, by the Society making a levy of ½d. per zen eggs for the purpose of raising capital. This was onded by Major Ellison.

Mrs. Mumford did not see why senders of eggs should be nalised while senders of birds should not.

Capt. Washington's suggestion was then read out in the m of an amendment to the proposal of Col. Rendel, and in ting it to the meeting it was lost.

The question of a member's share capital being made on the per hundred head of stock basis was then returned to, and . Rendel's original resolution was put to the meeting, and ried almost unanimously.

A vote of thanks to the Chairman was moved by Col. Nugent, onded by Major Ellison, and was carried unanimously.

Answers to Queries.

Continued.

A. C. L. (Teynham) is not a member of the S.P.B.A., so we regret we cannot reply to him by post, as it is against the rules of the Association. He requires a formula for egg production. The following is the best for his purpose. In view of the fact that there will shortly be a shortage of green food alfalfa meal is included: 1 cwt. bran, 1 alfalfa meal, 4 good middlings, 2 maize meal, and one meat and bone meal.

R. P. (Suffolk) writes :—" I have a house containing 300 White Leghorn pullets which started to lay about three weeks ago, and the majority of them are not looking healthy. The pullets which started laying first are rather inclined to sit about looking very depressed; their combs are not such a bright red as some of their more healthy sisters. They are fed on the following diet :—3 cwt. bran, 4 middlings, 1 S.G.O., 1 maize germ meal, and 0 stone of fish meal. Maize was stopped from the ration because of one or two cases of prolapsus." —So far in the letter there is not much to go upon, but a postscript is added :—" I might mention I have had several cases of Limberneck," and here we have come to the situation, for Limberneck is, as has been stated before in these columns, often due to ptomaine poisoning, and the general condition of my correspondent's birds leads me to the conclusion that he is feeding contaminated food. I should advise him at once to give the whole flock a mild dose of Epsom salts, and replace the fish meal in the mash with another sample, or a good sample of meat and bone meal, as this may be the cause, and if this is not so, it may be the maize germ meal. I do not think there is much doubt that the food is the cause of the trouble. When the cases of Limberneck appeared he would have been wise to have at once changed the fish meal, and omitted the maize germ, as these would be the two most likely sources of the trouble.

" Temple " (Bewdley) sends samples of bran at 7s. 9d. and 8s. 6d. That at 7s. 9d. is not good enough for poultry feeding. That at 8s. 6d. is fair value for the money. I should like to see a better sample though. Sharps at 9s. 6d. are excellent value, and are more economical than those at 11s. 6d., which are almost equivalent to wheat meal. Sussex ground oats at 15s. 6d. and 17s.; neither are " Sussex " ground. That at 17s. is dear; at 15s. 6d. is fair value for the money. Barley meal at 13s. 3d. is a better sample than that at 13s., and worth the extra money. Sharps at 9s. are inferior; little better than fine bran.

Coccidiosis.

GEO. ATKINSON, M.R.C.V.S.

Continued from Page 140.

As in the case of the poultry houses, it is necessary to destroy, before they sporulate, any oocysts that may be subsequently voided by apparently healthy birds. The problem of how to deal with the birds while the runs are being disinfected, and kept disinfected, is a difficult one, and it must, I am afraid, be left to the ingenuity of the individual owner to devise ways and means to suit his particular circumstances. The points to bear in mind in this connection are as follows :—

(1) The birds must not be moved on to new ground because they will infect it.

(2) Re-infection of diseased birds must be prevented, and therefore the run should be disinfected every four or five days.

(3) Birds must have fresh air and exercise in order to keep them as fit as possible to resist the infection.

If the ground is available, probably the best plan would be to have an alternative run. When the disinfection of the original run is commenced, turn the birds into the new run and let them use it for five days. Then turn them back into the old run which has been disinfected and turned over, and let them use it for five days. Then return them to the new run, which has meanwhile been disinfected and the soil turned over, and leave them there for five days. The original run may now be covered with quick-lime, which should be allowed to slake thoroughly, and then be mixed with the soil. At the end of the second five days in the new run the birds may be returned to the old run and have a further five days there. This gives us a period of twenty days on disinfected ground, at the end of which the birds should be either dead or recovered, and, if the latter, may be turned on to new ground. Chicks, of course, will be easier to handle in this way than older birds. Should the alternative run be impracticable, it may be possible to divide the existing run into two parts and use each part alternatively. If neither methods are practicable, the only alternative is to shut the birds up in the house until they have recovered.

While this disinfection is being carried out the birds must be carefully observed, and any ailing bird should be promptly put with the isolated lot or destroyed and burned.

The disease should be eradicated in about fourteen days if you are successful in your efforts.

Prevention.—In devising measures for preventing the infection of fowls with Coccidiosis one must always bear in mind three facts, viz.:—

(1) The excreta of infected birds is loaded with oocyst, and anything which can be soiled with excreta is capable of carrying infection.

(2) There is what we may call a period of incubation; that is to say, a bird may eat infected excreta, or food soiled with infected excreta, to-day and develop symptoms a week hence.

(3) A bird which appears to be perfectly healthy may have the disease in a mild form, and be spreading infection wherever it goes.

Bearing in mind these facts, the poultry farmer will be able to devise preventive measures to suit his own particular circumstances, but the following suggestions are put forward :—

Do not purchase fowls, chicks or eggs from any but the poultry farmer whose stock you know to be perfectly healthy.

Isolate all newly-purchased stock for at least a fortnight, even if they come from your best friend.

Isolate birds returned from shows and markets, especially the latter.

Some recommend that all eggs purchased for hatching should be wiped with strong alcohol or methylated spirit. This will at least mechanically remove any dirt which may be adhering to the shell and so reduce the possibility of infection to a minimum.

See that the drinking water is beyond reproach; it should not come from ditches, open wells, or cisterns.

Keep the poultry houses clean and dry, and see that no surface or other drainage flows through the runs.

If you are rich enough, wire the runs so that even the smallest bird cannot get to the fowls. This might at least be done for the chickens until they are two months old.

Those starting new poultry farms are advised to beware of ground which has been run over by pheasants or other game birds.

Never buy second-hand poultry plant or utensils. If you do, disinfect them by the methods already described.

Beware of the dealer or other stranger entering your poultry runs or handling your birds. Yo do not know where he has been during the las few days. Ask him to disinfect his hands and boots. He will probably be mortally offended but that is better than having the disease amongs your birds.

If you go to advise your neighbour about a sick bird or birds, disinfect your hands and boots on returning.

When a few birds have fallen ill, or an odd chick or two die, it is only human nature to think, "M birds, which are so beautifully kept, cannot pos sibly have any of these horrible diseases; it mus be just a cold or a little indigestion." It ma

(Continued at Foot of Column Next Page).

London Market Advice Table.

By **A. V. CLARKSON.**

SEPTEMBER, 1925.

The London Market still has little encouragement to offer to ıe producer with regard to chicken, owing to the fact that rouse are so much in evidence in both supply and demand, and om the first of this month Partridges will commence to rive, and, to make the tale a little more mournful, rabbits e also beginning to arrive; but the producer should have arketed the bulk of his surplus cockerels before this.

Chicken scaling 3 lbs. and over are the only ones that the ıyers want, and they are not prepared to pay even the poor ices existing unless the birds have been well fed.

With regard to hens, the prospects are brighter, and from ıis month onwards there is a better demand, more particularly ıtil the 19th of the month, which is a Jewish Festival. With gard to the marketing of hens (which should be sent alive), if nders will carry out the following instructions the little extra bour entailed will be easily repaid:—

> Pack the light breeds separate from the heavy breeds.
>
> Do not send birds full of water or solidified eggs. These birds are invariably the heaviest in the flock, and realise very little, or are condemned as unsaleable. They are classified on the London Market as "Water Bellies" and "Stone Bellies."
>
> If you have any Leghorns scaling 4 lbs., pack them separate from the average small Leghorn and notify the salesman in advance, because the light breed birds, being at a discount on all markets, are only sold at so much each, whereas these larger ones can be sold by the pound.

DUCKLING.—There would appear to be a very large supply coloured or runner duckling in the country at the present me, but for some reason there is a very strong prejudice gainst these classes of duckling on the London Market, and ıey only realise a very low price, because the buyers are only king white duckling scaling 5 lbs. or over when killed and ean plucked.

GOSLING.—There is a fair demand for a bird which has en either pen fed or coop fed, but the ordinary gosling which as not been so treated neither looks nor sells anything like well, and producers having gosling should pen them for at ast a fortnight and fatten for market.

EGGS.—The demand for eggs is slowly increasing, and the alisation price slowly creeping up, as is usual at this time of ıe year. Senders should grade their eggs, and not send mixed nsignments of hens' and pullets' eggs, nor should duck eggs mixed with hen eggs. Another usual precaution is to ensure ur name and address being inside the lid of the box. Under consideration must preserved eggs be mixed with new laid gs, the sender should notify the salesman before sending eserved eggs.

RABBITS.—Trapping will commence from now onwards, but course the high prices will not be realised until October. ıose sending Wild Rabbits should be sure and use the proper en hanging crates as supplied by the salesman, because rabbits ill get alive with maggots very quickly during warm or muggy eather if not properly packed.

COCCIDIOSIS—Continued.

, but, on the other hand, it may be the com- encement of an outbreak of Coccidiosis or other ntagious disease, and the man who starts control easures with the first few cases is the man who erts financial loss. Therefore it behoves us to always on the alert for these diseases, from ıich even the most sanitary and well-run poultry rms are not immune.

Some Fruit-Growing Notes

to help Poultry-Keepers.

By **F. W. WHEELER, F.R.H.S.**

AUTUMN NOTES (1).—We must all be very interested at this time of the year in studying results of our work in the orchards, or amongst our few fruit trees. It may be in noting the results of our winter pruning in relation to fruit bearing, or it may be to see what variety of trees are doing best in our soil and situation, or what difference is noticeable in the trees where poultry are running underneath as compared with those without birds to help in the manuring. Perhaps we can also determine the amount of good noticeable from our spraying, and which chemicals have given the most satisfactory results.

Commenting on these suggested observations I might make a few general remarks that may prove helpful, some referring to things I have observed from recent experiments. Firstly with regard to pruning. I had during the winter severely pruned some 15 or 16 year old Beauty of Bath apple trees to further open out the centres and crowded parts, and I have recently gathered a fine crop of well-coloured apples, and the greatly improved size of the fruit is very noticeable; this latter I must partly attribute to the poultry manure, for birds have now been running under these trees for five years.

Beauty of Bath is a fine early dessert apple, and when you get both size and colour it sells well, especially if you are near a seaside or holiday resort. While speaking of this apple, I might also mention that I found when I came here a few trees in a very bad condition from canker. Instead of destroying I kept them for experimenting on, and to see if I could cure them. They have responded splendidly to the treatment I have advised (in past notes in "Eggs") for trees attacked with this trouble. Here, again, the fruit I have just picked was of first quality.

Some other trees also, kept for noting effect of spraying against the scab trouble, are likewise improving, although they were in a bad condition when I took them in hand.

Spraying is often advised both for the curing and the prevention of diseases on fruit trees, but there is nothing convinces so much as having to fight a bad case to learn what can be achieved.

It is well to bear in mind that the poultry-keeper will chiefly have to fight against fungoid diseases rather than the insect pests, but with reasonable care and attention it should not give any anxiety. I mention it in passing, because we often read in our poultry journals of certain routine work, and essential operations that are necessary to reach and maintain success with our birds, and we must surely be surprised if we think how often such advice has to be repeated. So, also, beginners with fruit growing need continual reminders as to the care and treatment of their trees in order to produce the good article.

To return again to pruning. One continually advises pruning trees severely in their early years in order to obtain good sturdy leaders, or branches, even at the sacrifice of a little fruit blossom and fruit; and at this time of the year we can see the importance of it. For instance, just note the results of heavy crops on branches not sufficiently cut back to give firm branches, and we shall see them twisted out of shape and possibly broken off, and so lost for future crops.

This last paragraph naturally leads up to a few remarks I want to add to-day re picking and storing of good crops, as it is always valuable to have a reserve of fruit to draw on when the autumn glut is over. Great care must be exercised in this work. The longer the fruit can safely be left on the trees the better, in order to get the full flavour, but here correct judgment as to time for gathering comes in, for there is always the danger of autumnal gales coming unexpectedly, and all our best fruit being blown down and badly damaged. A good guide as to the right moment to pick is to lift the fruit from its hanging position to an upright one, and if it comes away easily then start gathering. You will often find that two pickings will best meet the case.

If you cut an apple and see the pips are starting to turn from a white to brown colour you have another test, and the changing colours of the different varieties of apples can soon be learnt by observation, and so we have a further guide. Fruit picked too early will not keep for storing, but shrivel badly, and I need hardly dwell on the importance of not bruising the fruits, particular care being taken with what is going to be kept.

A warning must be given here as to the careless use of the ladder when gathering fruit, and also respecting the harm done to older trees by damaging the bark in climbing or by standing on branches with nailed boots, for the wounds thus thoughtlessly made are frequently the starting places of bad disease troubles.

I must close to-day's notes with a brief reference to one new point respecting storage, for although it has been mentioned in other journals it is quite possible that my readers may not have read about it. Mr. P. M. Miller, a fruit grower of Harpford, Devon, carried out a very interesting experiment in October, 1924, with some Bramley's Seedlings.

He tested three methods of storing fruit in three boxes, each containing 120 apples. In one they were all wrapped in an "oiled wrap," in another ordinary white tissue, and in the third they were left unwrapped.

The result was most satisfactory with the oiled-wrapped ones, for as many as 114 remained perfect. In the second case 86 out of the 120 were good, whereas with the unwrapped ones only 47 came through perfect, with 43 blemished and th remaining 30 half rotten.

The cost of the American oiled wrap (speciall prepared tissue paper) was about 2d. for th hundred and twenty apples, so that the experi ment is worthy of further investigation, or trial on a larger scale, because commercially it ma be a very valuable help to the fruit growers, an the housewife will delight in being able to kee some apples for use in March and even later.

Mr. Miller also reported that "the treated stored apples did not merely keep—they improve in storage," and "increased in value fifty pe cent."

APPLICANTS FOR MEMBERSHIP.

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POST-MORTEMS—Continued.

G. T. The post-mortem examination of the R.I. pullet showed that rupture of the uterus had occurre and that this had been followed by peritonitis a sepsis. It is, of course, not infectious, althou several cases may occur in a flock should the unde-lying conditions that cause it be the same. Peritoni from infection from the uterus may arise: (1) fro

(Continued at Foot of Column Next Page).

Roup — Its Local and Internal Treatment.

By C. E. HAWARD.

The opinion has been expressed that members should give their experiences of dealing with roup, so, having just been through the mill myself, I thought perhaps the following observations may be of some interest, and I hope some use to other unfortunates. I think it will be best first to classify the various ways in which I have found the virus attacks the bird and deal with each separately later:—

EYES.—(a) Thick cheesy scab covering nearly the whole of one or both sides of face. (b) Mucous and cheesy matter under eyelids which adheres to the eye itself. (c) Watery discharge only.

MOUTH AND THROAT.—(a) Commonly known as canker. Swelling and fungus in angle of mouth. (b) Fungus growths on and under tongue, roof of mouth, throat and larynx.

HEAD.—Chicken pox scabs on comb, wattles, and face.

VENT.—Same sort of fungus as in mouth around vent.

During the early stages of the outbreak, being quite ignorant of treatment, there seemed three courses open: (1) Seek advice from experts; (2) try an advertised remedy; (3) experiment. Not knowing where to start, the third seemed risky. No. 1 was first tried. Advice given was, put sulphate of copper in drinking water, flowers of sulphur in mash, isolate birds affected, remove growths from mouth without causing bleeding, and paint with iodine. The sulphate of copper seemed to have no effect whatever. Cases cropped up just as fast, and there were very soon three houses full of patients. The scraping and painting were carried out, but to remove growths without causing bleeding in 99 per cent. of cases was found impossible, and the iodine did not stop it, neither did it prevent the fungus forming again.

It was then decided to resort to No. 2. I could find nobody who had tested any of them, so I decided on the one I thought sounded best, especially as it was claimed that no individual treatment would be necessary. A supply was obtained, and instructions were faithfully carried out. I soon found that individual treatment was most necessary or the poor sufferers would soon be adorned from head to foot with scabs and fungus, and that with mouths full of cheesy matter and eyes completely stopped up it was quite impossible to get down their beautiful medicated water. The remedy was given a good trial, and, although at first with some of the sufferers there seemed to be some improvement, cases were turning up in the flocks just as fast, and matters were getting decidedly out of hand. So this was dropped.

During this period a certain amount of No. 3 was going on, i.e., experiment on the growths. Iodine was found to be of little use.

I had not thought of trying it in the strength suggested by Mr. Wait. I tried a saturated solution of sulphate of copper, and found it a little better but not good enough. The thing I found did the trick, and I have found unfailing, is nitrate of silver. One dram of the crystals dissolved in a tablespoonful of rainwater or boiled tap-water kills everything when applied with a brush. Tap-water must be boiled, or it will precipitate the silver.

I will now enumerate the treatment of the various affections mentioned at the beginning. The eyes of all parts affected are the most unsatisfactory and difficult to deal with. To treat (a) I found it best to soak the scab with glycerine, gently remove it, and then plaster on sulphur ointment made of equal parts of flowers of sulphur and lard. Keep applying the ointment till the place is healed. (b) Usually destroys the sight, and if both eyes are affected the bird should be killed. I cannot claim to have found any satisfactory treatment for this, for what will kill the fungus will also kill the sight. (c) This is usually found to be accompanied with fungus in the cleft of the mouth, and when this is removed and painted with nitrate of silver, the discharge ceases. When not accompanied with the growth, dipping the head in Izal solution usually stops it.

Mouth and throat cases are fairly simple to treat,

POST MORTEMS—Continued.

actual rupture of the walls of the organ during the efforts at expulsion of oversize, rough shelled, or irregular-shaped eggs, and this is most frequently seen in overly-fat birds; or (2) by perforation by ulceration from the decomposition of the contents of shell-less, thin-shelled, or collapsed eggs in the uterus, so that although prevention in the case of (1) is a more difficult matter, and often impossible, the danger signals of shell-less and thin-shelled eggs make it possible to prevent peritonitis from this cause, by removing the dietetic conditions that produce them. Hyper activity of the ovary due to over-stimulation, and the lack of available lime salts, are apart from actual disease of the uterine gland themselves, the chief causes of thin-shelled and shell-less eggs.

F. M. C. There were no signs of roup in the W. Leghorn hen, the white "frills" being the normal fringe of papillae in the roof of the mouth. She was, however, suffering from chronic peritonitis due to perforation of the uterus from ulceration, the organ containing a large decomposed thin-shelled egg and a mass of egg material. As a preventive to roup periodic cleaning out and disinfection of the houses and equipment, and copper sulphate in the drinking water, is quite effective, provided that the disease is not introduced, and that any affected birds are kept strictly isolated.

although they take a good deal of time to do properly. The most effective instrument I have found to remove these is a pair of tweezers. When using a blunt knife or a stick there is always the risk that the bird in giving a violent struggle, as they often do, may knock off the growth and swallow it. The tweezers hold it firm, and each place can be completely peeled. They are bound to bleed (a) the Canker ones, but the nitrate of silver stops it at once. With these cases there is one thing to watch. Sometimes the surface of the skin just inside the mouth is hardly broken and nothing can be removed. A swelling at the side of the face tells there is something wrong, and I have found that if these are lanced from the outside that a ball of matter, often as large as a good-sized pea, can be squeezed out. If nitrate of silver is dropped into the wound it will not fill with matter again, and no scar is left. These I have called (b) in mouth and throat cases, which are usually known as diphtheric growths, and are treated much in the same way as canker, but when they first form they are tough, and the mouth will be badly torn if roughly treated. I have found that if the first treatment is to paint them only with nitrate of silver and hold the mouth open till they turn grey, that next time the bird comes up for treatment they peel off quite easily.

Now as to chicken pox scabs on the head. Were these the only ones to deal with, each bird would be cured in two or three days. Each scab must be torn off and painted with silver nitrate, and in a day or so can be peeled off again, when it will be seen that a lot of yellow spikes come away with it. I prefer to remove these rather than to let them fall off, for then you are sure of them being properly destroyed. When these places appear on the eyelids the same treatment is carried out, except that the silver nitrate stick is used instead of the liquid.

Vent places are treated much in the same way as the mouth, except that as the skin here is very tender and the bird often laying, it is best to soften the substance with glycerine before removing.

There is one thing of importance which I do not remember seeing advised, and that is, before returning any bird to the flock it should be totally immersed in a fairly strong solution of Izal to kill any germs which may be about the body.

So much for external treatment. I should feel, however, that, useful as the foregone information may be, it would all be to no use if I were unable to tell some reliable remedy which will cleanse the birds internally through the organs, and, of most importance, the blood. I am not sure that many will be ready to accept it, especially pathologists, for it is by no means orthodox. Here it is, however. I am a great believer in homoeopathy, so I discussed the matter with a homoeopathic specialist, in whom I have great faith, and he prescribed the following: Sulphur 3, for three days, putting 15 drops to the gallon of drinking water. Then a prolonged course of mercurius corrosives 6, again using 15 drops to the gallon. The sulphur prepares the way for the action of the mercurius. Those who know anything of homoeopathy will know that their way is slow but sure, and that large doses are wasteful. I can only say that from the time they received the remedies cases turned up less frequently and with less severity; until now, after a six weeks' course, no more are found. I shall continue it until my supply has run out, and then give it periodically as a preventive agent. That it has purified the blood I feel fairly confident, because flocks have recently been amalgamated to make room for the young pullets, and a good deal of fighting has been going on. In spite of this, there has been no festering or chicken pox, while during the outbreak nearly every peck seemed to cause trouble. If wet mash is used I should suggest mixing it with the medicated water, otherwise they would not get sufficient of the remedy in the drinking water only.

The cheapest quotation I obtained for the remedies was from E. Gould and Sons, Ltd., 59, Moorgate Street, E.C., who supply them for veterinary use at 15s. a quart. It is very obvious that I have not written all this for the benefit of those who have already been through it, so those who fortune has favoured and have so far escaped do not put this and any other writings on the subject aside thinking your conditions are too sanitary for it to visit you. That is where I went wrong. Gather all the information you can, for it may be coming your way **now.**

OUR FRONT COVER.

The White Leghorn hen which is depicted upon our front cover is the property of Miss Malcolm and Mrs. Pember, of the Wellingham House Poultry Farm, Ringmer, Lewes

It is hardly necessary for us to tell our members that, on this farm, experiments are being carried out on behalf of the S.P.B.A. by these two ladies.

This particular hen we handled very early in her pullet year, picking her out from a large flock, and remarking to Miss Malcolm that she was a bird of very high quality.

She was one of those birds which "stand out," and there was no mistaking her as a high producer. The trap-nest confirmed this opinion.

One of the features of selective breeding at Wellingham has been the maintenance of size in the highly-fecund breeds.

In the records given on the front cover it will be noticed that all the pullets weighed four pounds or over at the completion of their year's laying.

Selection on these lines has a great effect upon the maintenance of vigour and size of egg.

One notices all the points of a layer in No. 555. The bold eye, well-developed lobes, short beak, and good tight plumage.

We have other lady breeders who are doing as Miss Malcolm and Mrs. Pember are doing, cleverly maintaining body size and vigour, while breeding for the very highest production.

The pen, details of which are given on the front cover, should surely appeal to many of our readers, and it is certainly a unique way of advertising stock, and one which buyers will appreciate, in giving not only the record of eggs, but the size of the bird.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, AUGUST 28th, 1925.

GRAIN AND FEEDING STUFFS.—Owing to the wet weather ly relatively small quantities of new British corn have yet en marketed. New wheat is in slightly better supply at ondon, but is of rather poor quality, many samples being ected by the damp weather, and prices are slightly easier at out 12s. per cwt. Barley is sparingly offered, and at London akes from 11s. 3d. to 18s. 9d. per cwt., while oats, which are ated to be in good condition at Hull, realise from 9s. 6d. to s. 4d. per cwt.

Imported wheat is in fair demand, and Canadian is from 2d. 4d. per cwt. dearer, but other descriptions record little ange in value. Foreign feeding barley generally meets a slow ade and is cheaper at Bristol and Hull. Oats also are in iet demand, and prices for most descriptions are slightly wer on the week. Maize is in limited supply, but with a dull ade quotations are lower at all markets, the average price for rgentine being 11s. 3d. per cwt.

Milling offals mostly sell at recent values, but at Bristol oarse middlings have advanced 2s. 6d. per ton, while at iverpool bran is in fair demand and 5s. per ton dearer. Meals re in moderate request, maize products being dearer at Hull. otton-seed cake is in good demand at Bristol and London, and rices are firm, but linseed cake is in little request at late alues.

MILLERS' OFFALS.—Bran (British): Bristol, £7 17s; Hull, 7 2s; Liverpool, £7 15s; London, £7 7s. Broad Bran: Bristol, 9 2s; Hull, £8 12s; London, £8 15s. Middlings—Fine (Imported): ondon, £9 12s; Coarse (British): Bristol, £9 12s; Hull, £9 5s; iverpool, £8 15s; London, £8 10s. Pollards (Imported): Bristol, 8; Hull, £7 10s; Liverpool, £7 10s; London, £7 7s. Rice Bran: ristol, £7 17s; Liverpool, £7 7s; London, £7 7s. MEAL.—Barley eal: Bristol, £12; Hull, £11 13s; London, £12 5s. Maize Meal: ristol, £12 17s; Hull, £12 2s; Liverpool, £12 7s; London, £12 5s. aize Meal (S. African): Bristol, £11 7s; Hull, £10 5s; London, 10 5s. Maize Germ Meal: Hull, £11 10s; London, £10 10s. Maize luten Feed: Bristol, £11 15s; London, £10. Locust Bean Meal: ristol, £10; Hull, £10; Liverpool, £9 10s; London, £9 17s. Bean eal: Bristol, £13 15s; Hull, £11 18s; London, £13. Fish Meal: ristol, £20 10s; Hull, £20 10s; Liverpool, £20; London, £20 10s.

EGGS AND DEAD POULTRY.

In the egg market conditions are practically the same as hose prevailing last week. Supplies are very light and prices ontinue to advance in consequence.

Week-end Prices—Eggs (per 120): British, 20s 0d, 17s 0d; Irish, 8s 3d, 16s 9d; Danish, 19s 6d, 18s 3d; Dutch, 20s 3d, 18s 9d; rench, 19s 6d, 17s 9d; Belgian, 18s 0d, 17s 0d; Italian, 17s 6d, 3s 6d; Lithuanian, 14s 6d, 13s 6d; Polish, 13s 0d, 12s 0d; Chinese, 3s 6d, 12s 0d; Russian, 13s 0d, 12s 0d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish, s 1d, 1s 0d; Others, 1s 6d, 1s 1d. Ducks, 1s 4d, 11d. Geese, s 0d, 10d.

EGGS.

Per Doz.—Ashford: First, 2s 6d; Second, 2s 4½d. Birmingham: First, 1s 10¾d; Second, 1s 9½d. Chelmsford: First, 2s 2½d; Second, 2s 1¼d. Colchester: First, 2s 4¾d; Second, 2s 0d. Doncaster: First, 2s 2d; Second, 2s 0d. Dorchester: First, 1s 11d; Second, 1s 10d. Exeter: First, 2s 0d. Hereford: First, 1s 9d. King's Lynn: First, s 11d; Second, 1s 9d. Llandilo: First, 2s 0d. Mold: First, 2s 0d; Second, 1s 11d. Montgomery: First, 1s 9d. Newport (Mon.): First, 2s 0d; Second, 1s 10d. Norwich: First, 2s 0d. Oswestry: First, 2s 0d. Penzance: First, 1s 10d; Second, 1s 9d. Saffron Walden: First, 2s 4¾d; Second, 2s 1¼d. St. Ives (Hunts): First, 1s 11d; Second, 1s 10d. Salisbury: First, 2s 2d; Second, 2s 0d. Skipton: First, 1s 10d. Truro: First, 1s 10d; Second, 1s 9d. Welshpool: First, 1s 11d; Second, 1s 8d. *Carlisle: First, 2s 0d. *Derby: First, 2s 0d. *Ipswich: First, 2s 3d; Second, 1s 9d. *Lincoln: First, 1s 10d. *Shrewsbury: First, 2s 2d. Second, 2s 0d. *York: First, 1s 11d; Second, 1s 10d.

FOWLS.

Per lb.—Birmingham: First, 1s 3d; Second, 9d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 4d. Hereford: First, 1s 4d. Llandilo: First, 1s 9d; Second, 1s 7d. Newport (Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 4d. Welshpool: First, 1s 6d; Second, 1s 4d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 8d; Second, 1s 6d. *Lincoln: First, †5s 0d; Second, †3s 6d. York: First, †5s 0d; Second, 4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 4d; Second, 1s 0d. Doncaster: First, †5s 6d; Second, †5s 0d. Exeter: First, 1s 3d. Hereford: First, 1s 3d. Llandilo: First, 1s 9d; Second, 1s 7d. Welshpool: First, 1s 3d; Second, 1s 0d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 5d. *York: First, †5s 6d; Second, †5s 3d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, September 2nd, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to the poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

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Classified Advertisement Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

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will Sell by Auction on

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1150 UTILITY WHITE LEGHORN, RHODE ISLAND & LIGHT SUSSEX POULTRY,
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100 Light Sussex, 50 White Leghorn Pullets, March- April, 1925, hatched, 9s. 6d., 8s. 6d. each.—Chandler, Stonestile, Charing, Kent.

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FOR SALE.

Pullets, three to four months old, 6
7s. 6d., 8s. 6d.; carriage paid.—Wood
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Ten Leghorn-R.I.R. Pullets, March,
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Approval.—Wm. Howard, Fransham,
ham, Norfolk.

1925 Light Sussex Pullets. 6s. 6d.
72s. doz. Good class birds.—Wood P
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1925 Crop of Pullets and Cockerel
Sale; all varieties; also imported A
can Mammoth Bronze Turkeys, and
Cockerels, Pullets, and few Adults in
tically all breeds (including imp
American Turkeys) for Sale.—Edwa
Cass, Manager, Mill Poultry
Halesowen.—My Name is a guarante
reliability of stock.

WHITE LEGHORNS, AUSTRALIAN S
MISS CADELL,
THE DEAN, LONGNIDDRY, SCOTL
Offers Pullets, direct progeny of Aust
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15s. each. Younger Birds at lower p
Fine vigorous birds. Also 1924 Hens,
Lord Dewar; splendid layers; 7s. 6d.

WHITE LEGHORN PULLETS
April hatched, bred from trap-neste
blood-tested stock; 10s. 6d and 12s
carriage paid. — Godsmark, Sellindge,
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MRS. ATHOL STUART,
BOXMOOR, HERTS,
has still a few pullets left in White
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horns sold), also a few March cock
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Customer writes:—"I just want to say
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closely related to my successful L
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January, February and March hat
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riage paid on six — Spencer J
M.S.P.B.A., Combe Poultry Farm,
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Four, Five, and Six Months old; 10s
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Mrs. A. J. Moore's large egg strai

BUFF ROCKS.
Splendid layers of large eggs.

WHITE WYANDOTTES.
Full details on application. Carriage
On approval.

R. S. KEEP,
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DEVON.

BLACK LEGHORNS.
GOLD AND SILVER MEDAL WINN
PULLETS FROM 8s 6d.
Well-grown birds; large egg strai
ALLDAY and RAWSON,
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DERRINGSTONE
RHODE ISLAND PULLE
We are now booking orders for
Autumn for our early-hatched Pu
Wonderful colour and excellent w
layers. Quotations and particular
application.—Percival F. Gleed, Der
stone Poultry Farm, Barham, near Ca
bury.

EG

Wednesday, September 9th, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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Edited by TOM NEWMAN.
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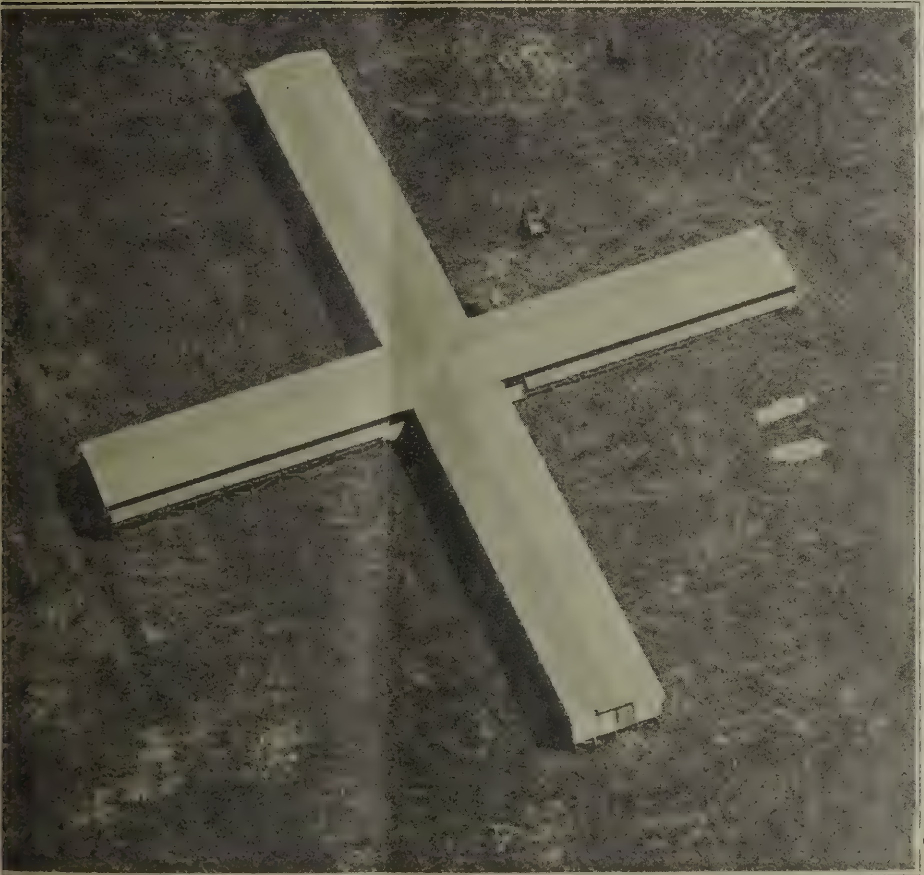

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Pedigree Breeder of Utility White Wyandottes, White Leghorns, R.I.R.'s, and Light Sussex.

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No. 8. Record 283 2-oz. Eggs in 12 months; 460 in 2 years., Stock Cockerels pedigreed from individual hens a speciality. BREEDING HENS with complete 12 months records, and 1925 PULLETS for SALE at commercial prices.

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SPECIAL LIST OF STOCK COCKERELS ON APPLICATION.

The "Heydown" Pre-eminent Strains *deserve praise and get it!*

THIS WEEK'S TESTIMONIAL.

17/8/25.

"The 50 White Wyandotte pullets supplied through the Ministry have arrived quite safely. Your birds need no advertising; they advertise themselves, and I must thank you for the manner in which you have executed my order, and for the excellent stock you have supplied me with. (Sgd.) R. W. M. (Atherstone).

SPECIAL OFFER OF BLACK LEGHORN PULLETS, 10/6 and 15/-.

ALSO INDIVIDUALLY RECORDED 1924 HENS, AND INDIVIDUALLY PEDIGREED COCKERELS, in our five varieties:
W.L., B.L., W.W., R.I.R., L.S.

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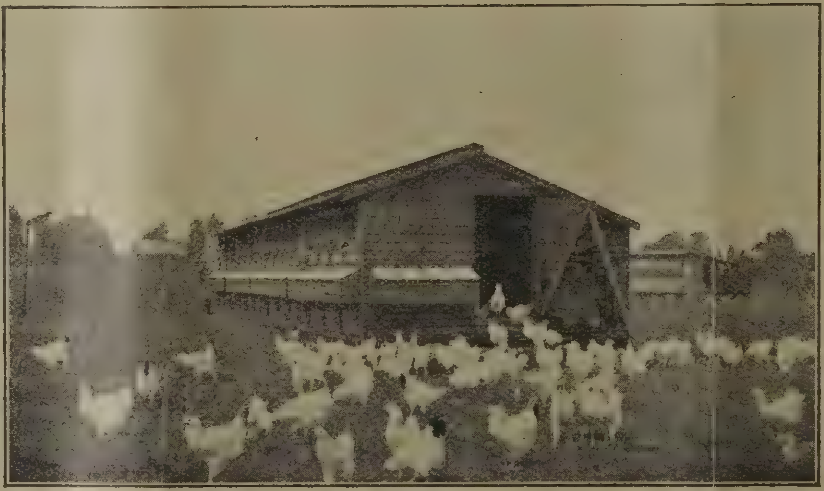
The "Eclipse" Poultry Houses.

DESIGNED AND MANUFACTURED BY A PRACTICAL POULTRY FARMER.



ALL OUR CUSTOMERS ARE COMPLETELY SATISFIED AND GLADLY PERMIT INSPECTION.

A No. 9 (40 ft. x 12 ft.). One of two supplied to Mr. T. F. Newman, Finstock, Knockholt, Kent.

Extract from Mr. Newman's last letter:—"The pullets are doing remarkably well in your two houses, and I am quite satisfied with the houses in every way."

FOR CATALOGUE WRITE—

HERBERT W. MARTIN, Perivale Poultry Farm & Appliance Works,
EAST HARLING, ATTLEBOROUGH, NORFOLK.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, SEPTEMBER 9th, 1925.

Editorial.

THE HARPER-ADAMS' CONFERENCE.

(*Continued*).

POULTRY FARMING FOR WOMEN.

Miss Olive Rawson, whose paper was a very eresting one, claimed for women that they were ore methodical than men, and gave more attention detail. Possibly this is true, and we feel most of r readers will be inclined to agree with Miss Rawson this respect.

Certainly women as rearers can fairly hold their n with men, and we have heard not a few well-own poultry-farmers declare, that where rearing is ncerned, the woman is the best every time.

Is not Miss Rawson generalising too much when e says that "They were weak in the business side, d weak in book-keeping, costings, etc., and things ich come under business headings"?

Our own experience has been that they are remark-ly keen. Her assertion that they fail in book-eping and costing would certainly apply to the ultry Farmer in general.

While agreeing with Miss Rawson that carpentering a branch which should be studied, and a knowledge timber is essential, it should be recollected that the rk of the farm is already sufficiently arduous with-t women themselves indulging in the construction houses, etc

POULTRY FARMING IN RELATION TO PRESENT-DAY AGRICULTURE.

We had the good fortune in the Spring to spend a y or two with Mr. Harding, and we were confident t his paper would be listened to with the greatest erest.

As a general farmer with 600-acre farm, he can eak on the subject with authority His own poultry re the best paying stock on his farm. He finds he buy food cheaper than he can grow it. There re advantages in labour. He would not keep one n less on the farm if he had no poultry. Freightage s cheap, because it did not entail extra horses. He spent large sums in artificial manure, and now uses poultry manure, and this was a great economic ing. The general farmer had no rent to pay for poultry; he had plenty of skim milk, which was heap form of food, and the waste products on the farm were valuable for poultry. He had three or four hundred acres of stubble, and it did not cost a penny for keeping while the birds were on the stubbles. Straw and litter were cheap. Turning it into manure by the aid of poultry was better than doing it in the farmyard, because it was kept dry.

He had 1,600 head of poultry, and his plant had only cost £250.

He strongly advocated the education of farmers' sons on the benefits to be derived from keeping poultry on the farm.

Mr. Harding remarked that poultry farming was the most scientific branch of agriculture. He praised the poultry papers, and said if farmers had such literature the general farmer would do better.

It is a matter of great satisfaction to be able to record the increased interest which is being taken in poultry by the general farmer. His opportunities are great. He is in a far better position to compete with foreign imports than the commercial egg farmer, or the specialist breeder, because of necessity he is in a position to produce eggs at a far less cost.

We stated recently that the majority of the eggs which we obtain from the Continent were produced at a much lower cost, because they came, not from the specialist poultry-farmer, but the general dairy farms and small-holdings, where poultry were a secondary consideration. Labour costs, rent and establishment expenses are comparatively small items on the Continent; with us they considerably enhance the cost of production.

With all this evidence before him, the general farmer still looks askance at poultry-keeping. A very large percentage of them ridicule it; think it beneath their regard, and only a fit occupation for women. While this point of view is maintained we cannot hope for more rapid progress.

We wonder what they would think of Mr. Harding's assertion that "Farmers have not had the benefit of higher education, and have been driven into their slip-shod methods by lack of opportunity."

Mr. Tyzack asked Mr. Harding if he thought it was an economic proposition for the farmer to buy day-old chicks. The answer was in the negative. In fact we cannot see that any other reply was possible. Why should not the farmer breed his own stock? He certainly could not buy day-old chicks so cheaply as he could hatch and rear them himself.

We may say here that Mr. Harding's plant is by no means an elaborate one. It is all sufficient for his purpose, and there appears to us to be no good reason why the general farmer should not take the fullest advantage of what buildings he has on the farm, and

(Continued at Foot of Column Next Page).

Modern Poultry Feeding.

By **TOM NEWMAN.**

PROFESSOR THOMPSON'S PAPER.

Professor Thompson's valuable paper, read at the Harper-Adams' Conference, and subsequently published in these columns, has been greatly appreciated by our readers. Many questions with reference to it have been sent to me, which I think would have been better addressed to him personally. However, there are one or two matters on which I would like to comment, with a view of eliciting further information. Please note, this is comment, and not criticism :—

> "If laying hens do not enter the winter season with an egg surplus of flesh and fat, they cannot possibly stand up under a long season of egg production."

I have repeatedly drawn attention to this in these columns, mentioning that each year numerous complaints are received of pullets coming late into lay, laying intermittently, or ceasing to lay, because so many poultry-keepers fail to recognise that a hen must have fat in her body to lay. This is by the way, and is intended as a hint to those readers who, at this season of the year, usually underfeed their growing stock, and then express surprise that they do not come into production.

We now come to that part of Professor Thompson's paper, in which he deals with the question of the grain feed. I am afraid I do not attach the same relative importance to this as he does, and must confess some surprise at the suggestion, that the unskilled and inexperienced poultry feeder, will, perhaps, make his greatest errors in feeding in this direction.

This has not been my experience. Of thousands of rations submitted to me during the past ten years, it may safely be said that in 95 per cent. of them it is the mash that is wrong. I have not time here to indicate why they go wrong, but will try and do so later.

We start with the knowledge that if we feed any single grain, or combination of grains, the protein will be poor in quality, unbalanced in its composition, the mineral content low, and the calcium salts a negligable quantity, and the carbohydrates a pure starch. All these deficiencies we must supply in the mash, and that is why I can't quite see eye to eye with Professor Thompson in this matter, for we look to the grain to supply chiefly the carbohydrates and fats. The greater difficulty appears to me to lie with the mash. Let me digress a moment. In the first Wellingham experiments we succeeded in rearing pullets in close confinement without any grain feed whatever, they were exhibited at the Harper-Adams' Conference that year, when five months old, and caused great sensation. They attained a great size, laid exceedingly well the following winter many eggs exceeding 3 ozs. in weight, and th average being well over two ounces. Not one o these pullets received a grain of corn until tw went broody in the following spring. This is little beside the point, I only mention it to sho the grain feed is not absolutely essential, that hen can be kept in perfect health and productio on mash feed alone, which would be impossibl with grain, whatever the combination may be, because of the deficiency mentioned above. Provided I was well satisfied as to the balance of m mash, I would feed kibbled grain as the sole grai to heavy layers the year through ; but I woul not feed it heavily to young growing stock fo reasons already given. My view is, that the grai ration should be adjusted to the actual conditio of the birds rather than in its relation to the mash I perhaps misunderstand Professor Thompson, i I am wrong he will forgive me, but, as I read it he appears to desire to arrive at a nutritive ratio of 1 to 4.5, or thereabouts, by balancing the grai ration with the mash. Possibly that is why h attaches so much importance to the grain ration but I do not see it in that light, only as a mean of supplying body fat, heat and energy. That i to say, I would be guided by the condition of th birds as to the quantity and kind of grain to feed rather than work to an albuminoid ratio.

Coming now to the method of feeding grai during the winter months, Professor Thompso recommends 12 lbs. to every 100 birds, rathe less than 2 ozs. per bird ; in the summer this i reduced to 10 lbs. One quarter of this ratio (rough ½ an oz.) is fed at breakfast time, anothe quarter at mid-day, and the balance, rather les than an ounce, fed within the hour when the bird go to perch. In practice, in this country, we fin a heavy grain feed at night, more particularl when the birds are on the perch for so man hours during the four winter months, is more con ducive to heavy egg production ; as a minimu amount, I would consider 2 ozs. per bird necessar to give the best results. Further, I cannot follo the reduction of the grain feed in the summe

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EDITORIAL.—Continued.

his capital outlay should be a proportionately sma one.

One point in Mr. Harding's paper is of extrem interest. He had tried three breeds, and found th the R.I. Red gave him practically ten shillings p year per bird more than did the White Leghorn.

Professor Crowther expressed the opinion that th General Farmer could produce eggs at half the cost the Poultry Farmer We are not quite sure that th difference in the cost of production would be quite great as this, but should that be the case, then can foresee the time when the General Farmer this country will go a long way towards keeping in o own land all those millions of pounds which a annually spent on the foreign egg.

ionths, except to birds on range, as our experi- nce is that the greater the production the greater ne consumption of food, and we have found that y increasing the grain ration at the end of May at the laying season is prolonged, and the ndency to an early moult checked. After eavy laying during the flush season the body fat inclined to be exhausted, eggs become smaller nd fewer, and the advice I have so often given feed maize fairly heavily at this time has main- ined size and prevented the rapid falling off in roduction, which is so often apparent at this me. The following is an extract from a letter ceived August 28th, which will illustrate my eaning :—

> " It might interest you to know that through your oft repeated advice in 'Eggs,' re feeding maize when eggs are noticed to be small, and reduced supplies at end of flush laying season, I have for the past three or four years found my birds keep in good condition, and the autumn months most profitable from the egg-production point."

H. W. TUTTON,
Swanwick.

In a flock of Rhode Island Reds in which I was ry much interested some three years ago, a nall grain feed was given at 7.30, wet mash nsisting of biscuit meal, Sussex ground oats, and eat meal, and middlings at 10 a.m.; this was 2½ hen weighed dry per bird. Another small ratch feed at 1 p.m., and 1½ ozs. per head of qual parts maize about half an hour before the rds perched. They laid well on this, but did not ppear to be in good condition, and, in view of e breeding of the birds, the production was rdly thought satisfactory ; so a readjustment of e feeding was made. The mash was fed at 7.45, scratch feed, one handful between every five rds at 11.30, and the grain feed increased to st over 2 ozs. given half an hour before perching. is resulted in improved egg production, larger gs, and improved condition. I should say that en the change was first made the pullets were ven as much grain as they could pick up in teen minutes, and this was found to average st over 2 ozs. per bird. The increased amount food fed could hardly have amounted to another arter of an ounce per head, but they went to ost with their crops packed, and were well fed a much earlier hour in the morning. I am cer- inly of opinion that a heavy feed of grain during winter months, as the last feed is conducive greater egg production, more so than if the ain ration was distributed over the day, and a mparatively small quantity given as the last feed oz.).

(To be Continued.)

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

A. S. B. (Gowanbank) has 40 White Wyandotte pullets, hatched 2nd March, which began to lay on August 2nd. Over a dozen are laying now, and they have laid over 20 eggs each. This last week he has found five or six eggs without a shell on the dropping-board in the morning. They are being fed equal parts wheat, oats and kibbled maize, morning and evening, one good handful between two birds. In addition they have dry mash before them *ad lib.*, the mash being that published in "Eggs" for pullets up to five months old. Is this feeding all right? Leghorn pullets hatched 28th March are not laying yet, but look like beginning soon. Should he put the pullets on to the laying mash? He has lost about five Leghorn pullets, hatched March, 1924, and all from the same cause, as far as he can tell. They turn yellow in the face and comb and wattles; go off their food, and gradually get worse, in spite of repeated doses of Epsom salts. They are fed one handful of wheat, maize and oats, 1½ozs. of laying mash, weighed dry, given wet, and dry mash *ad lib.* The flock as a whole seem healthy enough, and have laid well since February. Up to now they average 112 eggs each for six months. "Am I right in thinking that the deaths were caused by liver trouble, and the feeding was the cause of this."—My correspondent appears to have a very highly fecund strain of Wyandottes. The soft-shelled eggs are probably from one or two of the three pullets which have laid over 20 eggs each in 25 days, and I should be inclined to remove these from the flock, and feed them rather sparingly for a few days. When a very prolific pullet comes into lay she will often put up a long sequence like this, and the result is often shell-less eggs. Gradually she will slow down and right herself, but such birds must not be stimulated. Unfortunately we cannot treat the flock for the individual. It would not be advisable to put such birds on a layers' mash yet; wait another month. With regard to the others, these appear to be suffering from jaundice, due to over-feeding, the 1½ozs. of wet mash, in conjunction with dry mash *ad lib.*, and the grain feed has been too much for them. Had they not laid heavily it is probable the losses would have been serious. Half-an-ounce of wet mash, in addition to the dry, should be sufficient, and he must be careful now the birds are going out of production.

T. B. (N. Wales) expects to start farming on his own account next season, his object being to have 400 pullets by September 1st, and he asks what number of eggs it would be advisable for him to order to get this number.—As I gather from his letter that he has had comparatively little experience, I think he would be wise to count 4½ eggs for every pullet he wishes to rear to healthy maturity. That would suffice in a normal season. I can see no reason why the Rhode Island Red should not be a profitable fowl for his purpose, as he wishes to supply the commercial egg and a table fowl as well. The hot-water incubator he mentions would not give him better results than a good hot-air machine, and the additional expense is not warranted. If I were running Rhode Island Reds, it would be in units of 100, and I would not exceed that number under any circumstances.

A. M. B. (Denholme) sends a very good sample of middlings, and something very inferior, described as Sussex ground oats, which is ridiculously dear at 17s. per cwt. You have only to examine the fibre in this, "A. M. B.," to be sure it is not S.G.O.; it is a sample of ordinary ground oats, worth about 13s. per cwt. I am sorry not to be in a position to recommend him to a dealer in his neighbourhood. The combination should be wheat bran, etc., not wheat, bran.

S. E. R. (Burnley) asks for a very candid opinion on his proposed methods of mating for next season. The trouble in this work, my friend, is to **refrain** from giving a candid opinion, not in giving it. I wonder your commonsense has not helped you in this matter, especially as you tell me you are not actually a novice. You bred last year some pullets from selected hens mated to a male from a 282 egg hen, these pullets have proved disappointing, their eggs are small, and you think they lack vigour, and yet you want a candid opinion on your idea of mating them back to their sire. Well then, you could not do anything more foolish, and you will be very unwise if you breed from them at all. From what you tell me I don't think your stock is at all good, and, in such an exposed situation, you would do better with the Buff Rock and Black Leghorn than with the White and W. Wyandotte. Your feeding is correct, except that you are using too much fish meal, and might well reduce it by 5 per cent. No, I don't think dry mash would give you bette results.

J. D. (Treberth) finds when cleaning the dropping board matter resembling raw meat, and asks if it is a disease. (2) One of his Rhode Island Red pullets is about six months old, and up to last week appeared a very healthy bird, but unfortunately something has gone wrong with her back part; when walking her abdomen drops. (3) One of his cocks has been fighting, and came off second best, now he is quite giddy when the least excited, and turns and twists his head unnaturally. Would I advise his use as a breeder?—The first trouble is caused as a rule by the excess of fibrous matter in the food, and it will generally right itself if this is reduced, but often only one individual is affected, and to treat the flock for this would be a mistake. (2) This may be a case of egg binding, although this is rare with a young pullet with her first egg, or it may be a broken down abdomen, again rare with a pullet, and she would exhibit symptoms which my corresponden could hardly mistake; in the latter case no treatment would be effective. He should try steaming the vent if he suspects egg binding and gently oiling the part. (3) The bird may recover if kept perfectly quiet, in that event he could be used as a breeder. My correspondent must exercise hi own judgment in this matter.

F. M. C. (Hindon) lost a hen, which the repor from post-mortem examination stated to be du to chronic peritonitis, set up by the perforation of the uterus from ulceration. He has previously lost ten, which he says showed the peritoniti symptoms, and now I am asked to tell him how to deal with "this peritonitis question." I am not inclined to believe that these birds died from the same cause in spite of my correspondent' assertion that the symptoms were the same neither do I know what caused the ulceratio which set up peritonitis, so I am quite unable t help him.

J. T. B. (Boothstown) wants what I consider th best mash, he does not say whether wet or dry but the following I consider the best :—Alfalf meal and bran 1 lb. each, middlings 4, maiz meal and Sussex ground oats one each, meat an bone meal or fish meal 1 lb. This can be use wet or dry; if a change is desired biscuit meal ca replace the ground oats in the wet mash, cooked potatoes could be used instead of eithe The best grain to feed would be: Wheat one par kibbled maize 3 parts. Approximately 2½ ozs. mash should be given when weighed dry, and n less than 2 ozs. of grain as the last feed.

Tyro (Quarmby) has been very successful rearing Anconas on a mash which I gave in the olumns a little while back, now he wants a laying ash for what are practically intensive conditions. he following will be the best :—Alfalfa meal, ran, meat and bone meal, Sussex ground oats, aize meal, one pound each, middlings 4 lbs. his can be used as a wet or dry mash ; if the tter. it should be always before the birds. Grain eed, 3 parts kibbled maize and one wheat. In nswer to his further question, the pullets should e put on this mash at once.

G. R. W. (Stoke Flemming) has Australorps on ree range ; dry mash hoppers open all day, grain orning and evening. The birds have developed hat looks like a skin disease, all round the vent nd up to the roots of the tail the skin becomes right red. The application of diluted iodine and arbolated vaseline has had no permanent effect. do not think there is anything the matter with he birds, which have probably lost their feathers ormally, and the redness of the skin is due to xposure. It may possibly be the depluming cabies, in that case the skin should be thoroughly oaked with a 2 per cent. solution of Izal, but I xpect my correspondent will find that when the irds have moulted they will be quite normal again.

POST-MORTEMS.

A. E. T. The post-mortem findings in the two W.R. ducks were those consistent with the conagious septicaemia of aquatic fowl. The morality of this disease is high, and treatment of ery little service ; it might, however, be worth rying the effect of mixing sodium hypo-sulphite n the mash twice daily, as this has been so well eported upon as a preventive of another septicemic trouble in water fowl—viz., cerebro-spinal eningitis. The dose would be 15 grains per bird ight and morning, dissolved in the water that s used to make the mash with. I should be bliged if you would let me know the effect of his, as it is only by such reports of actual field xperiences that a real estimate of the value of emedial measures can be obtained. Disinfection f the premises and disposal of the litter and roppings by fire are of great importance in the ontrol of any infectious or contagious disease.

H. L. S. The post-mortem examination of the two W. Leghorns showed that they were perfectly ealthy and in good condition, and that is no pathological reason why similar cases should not be bred from. Dissection of the feet showed that the trouble in the feet was confined to the fatty-fibre tissue immediately beneath the skin, and due, I should say, either to bruising or to pricks with thorns or splinters. There was nothing to suggest tuberculosis, and such cases should yield to removal of the scab, opening up the swellings, and dressing with tincture of iodine. These would come under the head of "bumble foot," although the term in reality is only a popular one applied to foot abscesses generally. Apart from tubercular and gouty "bumble foot," the seriousness of the condition depends entirely upon the extent of the injury and the structures involved, and the degree of infection that occurs. In cases similar to these, where the injury has been slight and only the superficial tissues involved, little or no swelling or lameness is noticed, but where the puncture or abscess involves the tendon sheaths, tendons or the joints, great swelling and tenderness occur, and conditions dangerous to life from necrosis of the parts and consequent sepsis be produced. The treatment is the same in principle in cases of all degrees of intensity, viz., free lancing, with due regard to injury to the underlying joints and tendons, the evacuation of the semi-solid pus, characteristic of birds, and the application of antiseptic dressings.

M. S. The post-mortem examination of the cock showed that he was affected with vent gleet, which is a contagious disease, and cannot be attributed to any other causes, such as spoiled or inferior food, etc. Vent gleet is a most obstinate disease to treat, and, if attempted, affected birds should be isolated and the sexes separated. It is, indeed, doubtful if it is curable in the male, and, in my opinion, destruction is the better policy. In the female the chances of recovery are better, but they should be kept for egg production only and not bred from, owing to the danger to the male bird should the cure be not complete. The treatment consists in cleaning up the soiled exterior with warm water and soap, and anointing with a 2 per cent. carbolic acid ointment, and the inspection of the cloaca, at least once daily, of antiseptic lotions. A useful injection for this purpose is chinosol 15 grains, glycerine 2 ozs., boiled water 18 ozs., half an ounce of which may be used for each injection.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely : Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year begins on 1st September.

Angora Rabbit Wool Farming—VIII.

By the LADY RACHEL BYNG.

HARVESTING THE WOOL.

One of the most interesting features of Angora Rabbit Farming is the harvesting of the beautiful silky wool.

This can be done in various ways. Some farmers glean the wool by continually combing the Angora's coat with a small metal comb. This plan could not be adopted one would imagine with any great number of animals. The most popular method adopted by English farmers is "clipping." Clipping is achieved by the aid of sharp round-pointed surgical scissors. The wool is clipped close to the animal's skin. I, personally, always leave about a quarter of an inch of wool for two reasons :—

(1) To ensure the animal does not catch cold, especially in winter-time.

(2) To minimise the danger of snipping the newly-growing undercoat.

The third method is the one adopted by French farmers—"plucking." This method has one disadvantage. It cannot be done at any time, but can be adopted **only** when the wool is ripe.

As this is seldom the case all over the body at the same time, it may necessitate two, or even three, attempts before the Angora's wool is wholly harvested. But plucking has several advantages over the clipping process. Firstly, there is no danger of interfering with the newly-growing undercoat. This undercoat is firm, and does not come out when the ripe wool is pulled. Very often after a rabbit, adult or youngster, has been plucked it will be covered completely with a deliciously soft downy coat of one quarter to half an inch in length.

This coat would have been seriously hampered in its growth if clipping had been adopted.

Thirdly, more wool is harvested by plucking, as it comes away in its full length. Fourthly, as in the case with Shetland Sheep, so with Angora Rabbits, the plucking process ensures the finest wool. Clipping is said to coarsen the next crop.

The question is often asked, "What parts of a rabbit should be plucked?"

The only parts that should never be plucked are the feet, and legs up to the joints, corresponding to human elbows and knees, the head, face, and ears.

When plucking a doe before mating, do not pluck beneath the body or below her chin. The wool on these parts should be left for her to pluck when nest-making.

When possible it is better to pluck or clip a Brood Doe a month before you intend mating her. This gives time for the wool to make a good start before the doe has to devote part, if not most, of her strength to the making of her coming litter, and the provision of milk.

Farmers must realise that a nursing doe cannot possibly grow a good coat and nourish her babies. I have one or two brood does who nourish two or even three babies and grow a wonderful coat at the same time, but this means they have been able to have unlimited milk and green food. The babies weigh above the average, and the doe yields 2½ ozs. of wool to 3 ozs. when the babies are eight weeks old. If more than three babies are left with the doe, the wool yield invariably suffers.

A stud buck that is being used often also cannot be expected to yield wool up to his usual standard of weight. He will need plenty of green food, corn and milk.

By kind permission of "Newcastle Chronicle."

"ORION"—Lady Rachel Byng's big buck, weighing 9 lb. 8 oz., and giving 1 lb. of wool annually.

The first plucking takes place at six weeks of age. This wool can be mixed with the other, but the harvest does not amount to any great weight, from 6 to 8 drams. The second plucking is at three months. Sometimes the six weeks plucking is missed, and the baby's coat does not mat. It grows its three months' coat beneath the other, and when plucked at nine weeks or so there is a delicious undergrowth of softest silky wool, covering the rabbit's body. When this is the case it is a sign of a strong and healthy constitution, but if the babies of a large litter are left together till seven or eight weeks of age the wool is rarely left unmatted, as they have an annoying tendency to eat their food **over** each others necks and backs.

Bees.

By E. W. D. MADOC.

AUTUMN MANAGEMENT.—In most districts e honey flow is over, the supers of honey have een removed, and in a great many cases the bees re left to see after themselves for a bit. Next ear's honey flow seems such a long way off, and terest begins to slacken. This is all wrong, owever, as the early autumn months are the eally important ones in preparing for the honey rop to be gathered during next June and July, nd a stock put into the right condition now is e one that is going to yield a paying crop of oney next year; no amount of coddling and eeding of weak stocks next spring will give the ame results. The main essentials are plenty of od, and a good young queen of the right strain. ifty pounds of honey are necessary for the re- uirements of a first-class stock, and this amount f honey should be left on when removing surplus, r any deficiency may be made up by feeding ugar syrup, but do not put off this feeding until e spring. The sooner it is done the better, so at the bees may have a chance to ripen and eal the syrup before the arrival of cold weather. hite granulated sugar, mixed witht hot water the proportion of two parts of sugar to one f water, makes the best syrup for autumn feed- g, and may be fed in any of the feeders on the arket, or in a lever lid tin with small holes unched in the lid, or in a jam jar with two thick- esses of muslin tied over the mouth and inverted ver the frames.

Any stocks with queens over two years old, or ith inferior queens of any age, should be re- ueened at once, if this has not already been done. or successful wintering the majority of the bees hould be young, capable of living through the inter and well on into the spring until brood earing is in full swing, and there are plenty of oung bees emerging to replace them. Many eople advocate slow stimulative feeding through ugust and part of September to encourage the ueen to lay, to produce plenty of young bees. his may be necessary where old or otherwise nferior queens are present, but a good young ueen of the current season's rearing is quite apable of producing plenty of young bees with- ut the undesirable disturbance caused by slow eeding.

There is not room, of course, in the usual ten- rame British Standard hive for fifty pounds of tores and the bees and brood, so that a crate of hallow frames or, preferably, another set of ten f the deep frames should always be left on. When finally packing away for winter, put on plenty of covering material in the form of old sacks or anything convenient of a similar nature, and make sure that the roofs are really water-tight, as damp is far more harmful to bees than cold. A sheet of zinc or galvanised iron is the best cure for a leaky roof.

NORTHERN UTILITY POULTRY SOCIETY'S LAYING COMPETITION, 1924-25.

Tenth Report—July 11th to August 7th, 1925.

This term opened with a continuance of the hot summer weather until 25th July, when we had some heavy rain, the remainder of the days being unsettled, with slight rain and bright intervals. The pens have taken on again, the green of springtime having fully recovered from the two months of sun.

The health of the flock has been good. The yield of eggs has been maintained at about the rate of last month, and now that cooler conditions prevail, I am hopeful for a continuance of steady production Most of the leading pens are in full lay, so that if this is kept up some positions appear fairly secure; 118 have passed through the broody coops, while 18 fresh cases of moulting are noted. White Leghorn No. 141 added 26 eggs to her sequence, making in all 162 on successive days.

DUCK SECTION.

All competitors are in good health. but, with few exceptions all have, or are, moulting. On the last day of the period only one egg came to hand. Some of the earlier moulters are coming into profit again, and there are hopes of better returns for the 11th month, and for a Duck Test it appears that nine months are quite long enough.

EGG PRODUCTION OF LEADING PENS.

Figures are Eggs for Tenth Month and Total Points to date respectively.

Section No. 1. Championship (Ten birds).—Messrs. Longworth Bros. (W.L.), 138, 1523: Mrs. Crookes (W.W.), 146. 1518; G. B. Metcalfe (B.L.), 151. 1510; Mrs. Canning Roberts (W.L.), 156, 1504; J Thompson (W.L.), 162, 1268.

Section No .2. White Leghorns.—Wm. McMahon, 79, 800; Norman F. E. Kimberley, 87, 788; Richard Beesley, 111, 720; James A Rigby, 68, 720; E. J. Stone, 63, 654; Norval Swarbrick, 86, 651; G. H. Rayner, 50, 619

Section No. 3. White Wyandottes.—Robert P. Virtue, 107. 834; Mrs. Alec Wilson, 67, 694; J. E. Helm, 73, 680; Thomas Pinder, 66, 670; Moorhouse Beaumont, 67, 664; D. W Gunston, 73, 658.

Section No. 4. Any Other Variety (Non-Sitting).—Mrs. J. H. Hill (B.L.), 95. 718; Philip K. Berry (B.L.), 46, 586; Ernest Jackson (B.L.), 73, 555; M Flaherty (A.), 71, 526.

Section No. 5. Any Other Variety (Sitting).—Tom Gardner (R.I.R.), 68. 812; J. M. Thomas (R.I.R.). 67, 733; J. B V. and W. Cummings (R.I.R.), 94, 685; R. Duckworth (R I.R.), 57, 676; J. Ashworth (R.I.R), 69, 663.

Section No. 6 Two Birds.—Bolton and Gardner (W.W.), 37, 338; Henry Purves (W.L.), 47, 331; Mrs A. Stow (W.L.), 40, 328; E. J. Stone (W.W.), 20, 280; T. H. Barker and Son (B.R.), 23, 280; Lill and Clarke (W.L.), 42, 259.

Section No. 7. Single Bird.—E. J Stone (W.L.), 22. 190; R. K. Tallis (W.W.), 18, 190; Frank Heyworth (W.W.), 13, 186; E. M. Saul (W.L.), 26, 178; Wm. Edmondson (R.I.R), 13, 165; H. Dunn (W.W.), 21, 152.

Section No. 8. Small Breeders.—Wm. Machin (W.L.), 93, 761; E. M Saul (W.L.), 61, 680; S. Lindley (W.L.), 92, 657; Eric Bernard Tingle (R.I.R.), 73, 560; Robert Ingham (W.L.), 71. 530.

Section No. 9. Cross Breeds.—Mrs. Clara Egar (B.M. x W.W.), 63. 743

Section No. 10. Ducks.—Wilson Beattie (K.-C.), 54, 779; Maunder and Colson (K.-C.), 37, 693; Oscar C. Brown (K.-C.), 38, 649; Chivers and Sons (K.-C.), 18, 562.

Section No. 11. Single Duck.—Arthur C. Marston (K.-C.), 18, 147; Oscar C. Brown (K.-C.), —, 147; Mrs. E. M. Kirkley (W.R.), —, 103: Capt. P. C. Thompson (K-C.), —, 93.

Correspondence.

SEX-LINKAGE.

To the Editor of "Eggs."

Dear Sir,—In the Editorial of the current number of "Eggs" you invite arguments in favour of sex-linkage. As, from the point of view of the general farmer, I have but little to say in favour of sex-linkage, perhaps you will allow me space to elaborate my arguments against it. When I asked, at the Harper-Adams' Conference, the question you mention in your comments, I did so with the hope of drawing out the supporters of cross-bred stock. Unfortunately, this failed at the time, so I return to the attack through the medium of "Eggs." Undoubtedly, in certain cases, it is of great advantage to be able to detect the sex of chicks at hatching; thus, where a poultry-keeper has a market for D.O. cockerels at about 4s. a dozen, it may be to his advantage to breed first crosses. But looking at it from several other points of view, that of the general farmer, the poultry farmer, or the backyarder; to the general farmer it is of little use, as he has plenty of room to run his young stock, and can rear cockerels very economically so long as he can distinguish the sex before he wants to kill for market. To advise him to buy day-old pullets is absurd, because it is the rearing of the stock that is so much trouble, while it is no advantage to buy five-months cross-bred pullets when he can get good pure-bred pullets. There is also the added danger that the farmer will not stop at the first cross, but will soon be breeding mongrels.

With the specialist poultry farmer a great deal depends on the individual situation. If there is a market for day-old cockerels then it should be seriously considered, but in most cases it is of doubtful advantage. Suppose a cross is wanted to replace a light breed, such as the Leghorn, then one might suggest the Light Sussex x Brown Leghorn, a very popular cross. But with the Leghorn broodiness is practically negligible, while the cross is as bad as a heavy breed, if not worse. The backyarder could, perhaps, make more use of sex-linkage than any other branch of poultry-keeping, but will he use it? Most backyarders like to have a few cockerels for the table, and if they have to be bought separately, the only advantage of sex-linkage is that it enables him to make sure of having enough pullets. Then there is the personal element to consider, most backyarders being very proud of their stock. They like to have only the best, and there is but little satisfaction in looking at a pen of cross-breds as compared to a pen of pure-bred pedigree pullets with all the association of name, strain, and record.

No matter how often we may shut our eyes to the fact, sex-linkage will lead to the breeding of mongrels. It is all very well to talk about educating the poultry-keeper, but how long have we been trying to persuade him to keep his birds decently, and in how many places can you go and find wretched specimens of birds kept in small, dirty hutches? Not so many as a few years ago, but still far too many. **A man who keeps his stock in bad conditions, short of disease, is a menace only to himself, but the man who breeds mongrels is a menace to the whole poultry industry.**

No.—Better leave sex-linkage to the experimentalist until it is definitely proved that it is useful to the poultry-keeper, until tests have been held with large flocks, and until they have been reared on a large scale, and all the figures, such as rearability, etc., published. Until then let us devote our attention to the many problems awaiting solution in the field of practical poultry-keeping—breeding, incubation, rearing and feeding, housing, and so on, while the scientist is investigating the relation of fecundity and colour.

I remain, yours faithfully,

JOHN E. V. TYZACK.

SEX-LINKED INHERITANCE.

Dear Sir,—I have read with interest Dr. Crew's remarks at the Harper-Adams' Conference, published by you in "Eggs" of August 26th.

This is a very important subject, and I feel sure there are a great number of others besides myself who would welcome further practical opinions and experiences.

My experience so far has been with Light Sussex and Brown Leghorns only, and I found several advantages in the cross. The chief advantage to me has been their quick development and hardiness, and it also enables me to fill up my rearing plant with only pullets at a time of the rearing season when it is at its busiest, and have no room to carry passengers. There is no need to hatch this cross before April to come into lay at the same time as the heavy breeds (4/5 weeks older), which for the North I do not hatch after mid-March. This also enables me to replace any unexpected losses I may have had in the heavy breeds. So far I have been able to dispose of all my day-old cockerels at 5s. and 6s. per dozen. When I am unable to do so I consider I can well afford to kill them. I have not found the cockerels from this cross to pay for fattening—they are a second-grade table bird, and come into the market at a time when the market is full of this class of bird and prices low.

With regard to the laying qualities, I am not quite satisfied. They compare very favourably with good White Wyandottes. My pen of Light Sussex Brown Leghorn in the "Daily Mail" laying competition have been very consistent layers. These birds were bred from exhibition Light Sussex and Brown Leghorn Cockerels which were bred from hens with good records.

Yours faithfully,

THE BUSBY POND POULTRY FARM.

August 31st, 1925.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

AN EXTRACT.

[This is from a letter with reference to the Food rchase Scheme:—

From a letter which you recently quoted in "Eggs," it uld appear that I have been under a misapprehension about food scheme in thinking that the offer to supply 5 cwt. lots he Layers', etc., mash at the two-ton rate applied ONLY to price. Does it really mean that I can send along an order, say, 5cwt. of Layers' mash ONLY, not making up a two- lot?"

hat is exactly what it does mean. If you want vt. of layers' mash you can have 5cwt., and need have anything else with it. What is meant by the -ton rate is that if it is supplied at £11 10s. 0d. per , you get it at 11s. 6d. per cwt. by taking 5cwt. ere is no increase in the price because you are ing the smaller quantity, as is customary.

'or price and quality the mash we are offering can- be equalled, for we are not working for a profit. demand is increasing every week, and members realising now what great benefit the scheme is to m.

'rices this week are as follows:—

CHICKEN MASH	12s.	6d.
GROWERS' MASH	11s.	6d.
BREEDERS' MASH	12s.	3d.
LAYERS' MASH	11s.	6d.

'lease note these are London prices. There are ht fluctuations in different districts, a little higher little lower. You will be supplied by our nearest nt to you, to avoid heavy rail charges.

RED MITE.

n Ormskirk reader is pestered with red mite. emptied a house (15 x 8) last week, and on mining the interior he found the pest all over interior. He keeps his houses very clean, and not understand how they come. He wishes know if there is any remedy by which he can nfect the house and birds at the same time. former he has already taken down and dis- ected every nook and cranny. He asked a ltryman, and he replied, "Oh, a few red mites nothing."

t is always difficult to keep a house entirely from red mite, and it is very common to eive a letter such as that of my correspondent's, which the writer says his houses are very clean, he finds them infested with red mite. I am prised that in such a case as described above birds were not badly affected. In answer to his question, there will be no need to disinfect the birds themselves, the mite visits the hens only to feed. It is a bloodsucker, and, having had its fill, drops off the fowl and crawls to the end of the perch, or to some crevice, so that, having disinfected his house, if he will just direct his attention to the ends of the perches for a few nights he will completely eradicate the pest. When empty the mites are grey with dark spots, but usually they appear from some shade of yellow to dark red, according to the amount of fowl's blood they contain. The mites breed in the crevices, the young mites are white, and have only six legs. It is said their first food is probably filth or decayed wood. They moult several times, and their cast skins are seen as a white powder on the perches. Creosote, and crude paraffin, Izal (1 to 150) are all effective against the pest. If the ends of the perches were lifted once a week and daubed with any of these agents a great deal of mischief would be prevented.

APPLICANTS FOR MEMBERSHIP.

Somers, Mrs. H. T., Southrop House, Hook Norton, nr. Banbury.
Cook, O. A., Quickmoor P.F., Common Wood, Nr. King's Langley.
Nash, V. R., 108, Hurst Road, Eastbourne.
Bristowe, L. H., "The Feathers," Bovingdon, Boxmoor, Herts.
Lamble, R. E., Rosedale, Quarry Road, Pensilva, Cornwall.
Tacon, E. T., The Neuk P.F., Fosseway, Kinross-shire.
Warren, T. A., Sefton P.F., South Hill, Somerton, Som.
Peatfield, J., 23, Queen Street, Low Moor, Clitheroe.
Anson, J. G., Kenlaw House, Colinsburgh, Fife.
Golland, Miss D. M., Carside Farm, Appleby, Scunthorpe.
Boud, P. H., High Street, Whitwell, Isle of Wight.
Williams, R. J., Delight Poultry Farm, Deanhead, Barkisland, Yorks.
Lister, H., The Forest, Deanhead, Barkisland, Yorks.
James, A. J., 164, Clayhall Road, Gosport, Hants.
Rawlings, E., Woodlands, Tisbury, Wilts.
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Stockman, G. L., 3, Harlington Road West, Feltham, Middx.
Simmons, Mrs. R. H., Turville Valley F., Henley-on-Thames.
Streatfield, Miss M. R., Chanters House, Pilton, Shepton Mallet, Somerset.
Honeyball, E., Ashfield Green, Wickhambrook, Newmarket.
Page, F. B., Wellingore, Lincoln.
Petrie and Booth, Scot-lands, Warfield, nr. Bracknell, Berks.
Anstead, J., Westmoor P.F., Wallington, Surrey.
McCulloch, James, 146, Maukinfauld Rd., Tollcross, Glasgow.
James, Mrs. P. D. Haughton-, Wilscombe Wood, Milverton, Somerset.
Cliffe, Rev. J., 21, 7th Avenue, Parktown, N. Johannesburg, S. Africa.
Cartwright, H. B., "Moss Cottage," 4, Moss Colliery Rd., Clifton, Manchester.
Roberts, H. A., The Mount, Wetherby, Yorks.
Green, A., 26, Suffolk St., Mill Hill, Blackburn, Lancs.
Lowry, C. M., Pond Park House, Lisburn, N. Ireland.
Bridge, R. D. H., Chessington Grange P.F., Chessington, Surrey.

Tyers, A. T., Rose Hill Cottage, East Downs Rd., Bowden, Cheshire.
Bateman, Mrs. S., Sherbourne House, Allersley, Coventry.
Burne, H., The Grove, Fawkham, Kent.
Paterson, H. C., The Mount, Newton St. Loe, nr. Bristol.
Broadway, H., 78, London Rd., High Wycombe, Bucks.
Jenson, C. A .A., Capel Nelmes, Hornchurch, Essex.
Dodds, R., 2, Royal Avenue, Fonthill Rd., Bath.
Hurst, H., Rockbank, Light Oaks, Milton, Stoke-on-Trent.
Stonex, H. T., Vicarage Lane, Bowden, Cheshire.
Beatty, S., Flush Road, Upper Ballysillan, Ligoniel, Nr. Belfast.
Shirt, W., 138, Moorside St., Droylsden, nr. Manchester.
Ratcliffe, G. H., Brockencote, Chaddeslet-Corbett, Nr. Kidderminster.
Dumble, L., 4, Dorning St., Leigh, Lancs.
Harrison, R., 44, Lime St., Accrington.
Knight, H. O., Tanllwyfan, Llysfaen, Colwyn Bay, N. Wales.
Burden, Mrs. A., Green Lane Farm, Rawmarsh, Yorks.
Hanmer, Mrs. Hugh, Whitchurch Rectory, Shropshire.
Price, W., Beauchief Abbey Farm, Sheffield.
Bruce, N. P. R., Watlington P.F., Watlington, Oxon.
Gilbert, H., Polgear, Four Lanes, Redruth, Cornwall.
Cash, R. C., Foxley Mount, Lymm, Cheshire.
Boyd, David, The Greens, Scorton, Yorkshire.
Wood, H., The Maple P.F., Scorton, Yorks.
Kerby, P. W., Penare House, Manaccan, Cornwall.
Cameron, D., Fowlis Easter, Invergowrie, By Dundee.
Welford, G. W., 435, Linthorpe Rd., Middlesbrough.
Roberts, A. W., Shuttling Fields, Gregson Lane, nr. Preston.
Grunshaw, Percy, Manor Row, Copster Green, nr. Blackburn, Lancs.
Thomas, Wm., 36, Burnley Rd., Mytholmroyd, Yorks.
Simpson, Capt. D., Tickerage Castle P.F., Framfield, Sussex.
Brookes, Cyril O., Milestone P.F., Hykeham Moor, Lincs.
Le Grove, W. G., 277, Rosmead St., Hull.
Horsfall, S .C., Woodend, Howard Rd., Bournemouth.
Griffen, S. D., Knole Cottage, Pett, Hastings.
Watkins, S. James, "Oakdene," Upper Ruckinge, Ashford, Kent.
Atkins, James, Summer Bungalow, Latchingdon, Chelmsford, Essex.
Hutton, L. A., Brightling Hall, Robertsbridge, Sussex.
Coles, Charles J., "The Laurels," Mina Avenue, Slough.
White, Percy M., c/o Messrs. W. H. Brown and Sons, Erringden Grange Farm, Hebden Bridge, Yorks.
Wassell, Alfred, Kilburn Hall, nr. Derby.
Smith, F. W., Raikes Hall P.F., Cowling, nr. Keighley.
Drake, Fred, Schoolridge, Thornton, nr. Bradford.
Bentley, Harold, Schoolridge, Thornton, nr. Bradford.
Eurich, Miss G., Lanshawe Cottage, Ilkley, Yorkshire.
Sanderson, H., Law Bank Farm, Oakworth, nr. Keighley.
Driver, Pearson, 3, Hardings Lane, Keighley, Yorks.
Bancroft, Sam, Sun Street, Haworth, nr. Keighley.

Correspondence—Continued

DISEASE.

To the Editor of "Eggs."

Dear Sir,—Will you kindly allow space for this letter in your valuable magazine. Attention has been drawn to various articles in your magazine through a friend of mine, a Mr. Hunking, Chapel Chorlt Staffs. This gentleman forwarded the articles on me for my perusal, hence my interest and letter. M Hunking has a large poultry farm, and he invited to have a look around his farm, and give my opini I found excellent sanitation, houses not overcrowde all drinking vessels clean, conducive environment— short, everything that could be desired for fowls to in a healthy condition. In spite of all this he has l many valuable fowl. However, we worked togeth and through medication these virulent diseases ha practically been stamped out. I may point out tha have no fowls of my own, but am very interest and shall endeavour to do my very best to help th who are doing their very best to fight these var fashionable diseases. The articles I have read po to positive cures, little is said of the various caus

May I be allowed to ask a few questions of th gentlemen who advertise these various concoctio May be they are sincere, I hope they are:—1st: these gentlemen sure that they have found a posit cure? If so, why is the death rate so high if su cures have been found and tried so long? 2nd: they sure of the disease? and are they sure of the r cause of the diseases? 3rd: Do kindred diseases st with anaemia? 4th: Does the staining of the l cocytes increase the diphtheritic infection? 5th: the kidneys function adequately? 6th: Are th diseases, such as Roup, Pox, Diphtheria, etc., crea by infection through food or water? 7th: Is it p sible to have no diphtheric membrane at the time diphtheria?

I will leave other vital question for the ti Perhaps these will interest some reader, and no do someone will bring something forward, so that we m examine and give candid opinions, so that we may w together to try to counteract, if possible, these fashi able danger germs.

With apologies for taking your valuable time space.

Yours faithfully,
A. BARKER

CO-OPERATIVE POULTRY PRODUCTS, L SATISFACTION.

To the Editor of "Eggs."

Dear Sir,—Having sent over 1,000 birds to Co-Operative Poultry Products since May 22n wish to state that I am quite satisfied with pri received. It is impossible to judge the correctn of value of bird by weight only; condition is great factor. My birds have been picked weekly from free range and from among pullets, no special fattening having been gi them, but condition, not extreme weight, has b in their favour every time, consequently all pullets are now ready for the laying house.

Yours truly,
(Mrs.) E. M. L. KNIGHT

Selling Stale Eggs.

At Shrewsbury Police Court, on Saturday, Wesley Teece, of Haughmond Farm, Uffington, Shrewsbury, was summoned for, on August 8th, at the General Market Hall, Shrewsbury, exposing for sale 89 unsound eggs. and his father, Charles Harper Teece, of the same address, was charged with exposing the eggs for sale, the eggs belonging to him.

Mr. J. C H. Bowlder (Shrewsbury) represented the defendants, who denied the offence.

The Town Clerk (Mr. R. F. Prideaux). who prosecuted, said that on August 8th Wesley Teece brought n 243 eggs for the Saturday market, and as a matter of fact, they were offered for sale in the market to wo dealers without success. A point he wished to draw attention to was that although the dealers pointed out that some of the eggs were unfit, the eggs, nevertheless, lay exposed for sale in the market. Suspicions being aroused, Mr. W. H. Purslow, of the ocal sanitary inspectors. came on the scene. The eggs were more carefully examined, and were taken to Mr. Wilde, egg and poultry salesman, the Plough Yard, Castle Foregate, Shrewsbury, and there tested one by ne. It was then found that no less than 89 eggs were unfit for food. Later the eggs were taken before magistrate and condemned.

Mr. W. H. Purslow, sanitary inspector, said that when he xamined the basket of eggs in the general market he could see om external signs that some of the eggs were pretty bad. ome of them were rather dark, and there was no bloom on them all. He fetched Dr. Maurice Gepp, the acting medical officer health, and the eggs were later taken to Mr. Wilde's premises d tested. When told that he should seize 89 unsound eggs, Mr. eece senior said he hoped there would be no trouble, as he uld not understand how it came about. He, however, explained at they had been drawing straw during the week, and possibly me of the men had picked up some eggs under the Dutch barn. ece, he added, was quite frank about it. Wesley Teece told him at his mother usually brought the eggs to market, but she had rained her ankle, and had asked him to take the eggs to Mr. ilde. He did so, and Mr. Wilde suggested he should take em to the stall, and pick out the stale ones. He apparently isunderstood Mr. Wilde, and defendant later offered the gs to another dealer, who suggested that they were not good. e other dealer, Mr. Arthur W. Hallett, of Shrewsbury, took , and, examining the eggs in his own testing room in the rket, found that four of them were absolutely rotten. It emed that Teece, junr., afterwards took the basket of eggs to . Wilde, who picked out and paid for five dozen good eggs, but some reason or other, he later asked defendant to take the gs back. Witness explained that almost a novice could see once that some of the eggs were bad. Of the 89 condemned gs about a dozen had chicken forming in them. Mr. Teece d been bringing eggs to the market for many years, and this s the first complaint.

Mr. L. V. Wilde, the dealer referred to, said that Wesley ece offered the eggs to him for sale. His experience told him t some of the eggs were stale from their appearance. He ised defendant that some of them were absolutely rotten, and best thing to do was to go back to the bench and sort those , bring back what he thought were all right, and he would e what he (Wilde) thought were right, and would put them a tester.

t appeared that Teece, Junr., instead of doing this, offered eggs to Mr. Hallett. He (defendant) came back and said (witness) had better have them. He would only pick out five dozen which he thought was all right, and paid for them. When the basket of eggs was brought to him for testing he found 18 were absolutely rotten, 66 were unfit, and when boiled they would smell or burst. He agreed that if 50 to 60 eggs were found in a barn they would soon become stale owing to the heat of the building. He considered, he said, that this was a case of gross carelessness.

Mr. A. W. Hallett, poultry and egg dealer, Shrewsbury, said he looked over the eggs, and at once saw what a rotten lot they were. He tested six, and, finding four absolutely black, he told Wesley Teece of this. He reported the case to the authorities because he wanted to stop this practice of bad eggs coming into the market. He added: "I have to stand the loss all the time. I am absolutely fed up with it." He did not, he said, think the eggs had been found under the barn as suggested, because they had grass stains on them.

Dr. Maurice Gepp, who also gave evidence, suggested that it would be much better for everyone concerned if an egg-testing apparatus was provided in the market for public use

Charles Harper Teece, giving evidence, said that his wife generally looked after the collection of eggs at the farm, but she had sprained her ankle, and the maid, too, was away from the farm on holiday. In her absence his son, Wesley Teece, collected the eggs, with the exception of those which were found between the stacks when they were drawing a Dutch barn. They found about 60, and the eggs, looking nice and fresh, he took them into the house and showed them his wife, who broke four of them, and found they were perfectly all right. The eggs were afterwards put with those his son had collected. He brought the eggs because he thought it was only right to do so in view of the fact that he had found them in the barn. The eggs he found were nice and fresh He brought between five and six hundred eggs into the market on a Saturday, but at present was only collecting about 60 to 70 eggs a day at the farm. He was surprised to find so many eggs in the barn, but said he could not account for those eggs which were bad, except that the heat of the barn would affect them.

Mr. Bowdler said that, though Mr. Teece might have been somewhat careless in the handling of the eggs, he thought he could truthfully say that he did not know there were so many stale eggs. He thought, too, that it was pretty obvious that defendants had no intention of deceiving anyone because the doubtful eggs were all on top Another point in their favour was that the eggs were not exposed for sale to the general public, but were taken to expert dealers.

The Mayor (Councillor Bates Maddison) told Teece, senr., that the Bench took a serious view of the case. The reputation of the market was at stake for one thing, and they felt defendant did not take the care he might have taken, considering he was experienced. On finding a large number of eggs accumulated in one place he ought, at least, to have put them on one side. Instead of that he mixed them up with new-laid eggs, and brought them to market as new-laid. They very much regretted to learn that there had been a good deal of this going on, and the Bench felt it their duty to put a stop to it. Charles Harper Teece was fined £10, and his son, Wesley, was fined £3

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, SEPTEMBER 4th, 1925.

GRAIN AND FEEDING STUFFS.—New English wheat is in rather better supply at Bristol and London, and at the latter market the average quotation over the week has declined to 11s. 9d. per cwt. Finest parcels of new crop wheat suitable for seed purposes realise up to 13s. per cwt. at London. A moderate trade is passing at London in new English barley for malting purposes, prices ranging from 12s. 6d. to 13s. 9d. per cwt. for fair samples and from 16s. 3d. to 18s. 9d. per cwt. for finest parcels, but at other towns little business is being transacted. New crop home-grown oats realise slightly less money at Hull, but at London recent quotations are maintained, whites selling at 10s. 4d. and black at 9s. 8d. per cwt.

Imported wheat meets a moderate demand, and values have an easier tendency. Foreign grinding barley is unchanged at Liverpool and London, but is cheaper at Bristol and Hull. Oats generally are cheaper on the week, except at Liverpool, where recent prices are maintained. Maize is more plentiful and cheaper, the average quotation for Argentine being 10s. 7d per cwt. as compared with 11s. 3d. per cwt. last week.

Milling offals are generally in fair request, but bran at Liverpool is reduced 15s. per ton, while at London coarse middlings and bran owing to good supplies being available have declined 7s. 6d. and 5s. per ton respectively.

MILLERS' OFFALS.—Bran (British): Bristol, £7 15s; Hull, £7 2s; Liverpool, £7 10s; London, £7 2s. Broad Bran: Bristol, £9; Hull, £8 12s; London, £8 10s. Middlings—Fine (imported): London, £9 10s; Coarse (British): Bristol, £9 15s; Hull, £9 5s; Liverpool, £9; London, £8 2s. Pollards (imported): Bristol, £8; Hull, £7 5s; Liverpool, £7 10s; London, £7 5s. Rice Bran: Bristol, £7 17s; Liverpool, £7 5s. MEAL.—Barley Meal: Bristol, £11 15s; Hull, £11 13s; London, £12 2s. Maize Meal: Bristol, £12 12s; Hull, £11 17s; Liverpool, £12 2s; London, £12 5s. Maize Meal (S. African): Bristol, £11 5s; Hull, £10; London, £10 5s. Maize Germ Meal: Hull, £11; London, £10 5s. Maize Gluten Feed: Bristol, £11 15s; London, £10.

EGGS AND DEAD POULTRY.

Week-end Prices—Eggs (per 120): British, 20s 3d, 17s 0d; Irish, 18s 3d, 16s 9d; Danish, 19s 6d, 18s 3d; Dutch, 20s 3d, 18s 9d; French, 19s 6d, 17s 9d; Belgian, 18s 0d, 17s 0d; Italian, 17s 6d, 16s 6d; Lithuanian, 14s 6d, 13s 6d; Polish, 13s 0d, 12s 0d; Chinese, 13s 6d, 12s 0d; Russian, 13s 0d, 12s 0d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish, 1s 1d, 1s 0d; Others, 1s 6d, 1s 1d. Ducks, 1s 4d, 11d. Geese, 1s 0d, 10d.

EGGS.

Per Doz.—Ashford: First, 2s 5d; Second, 2s 3½d. Birmingham: First, 2s 1¼d; Second, 2s 0d. Bridgwater: First, 2s 7½d; Second, 2s 3d. Chelmsford: First, 2s 1¼d; Second, 2s 0d. Colchester: First, 2s 3½d; Second, 2s 0½d. Doncaster: First, 2s 2d; Second, 2s 0d. Dorchester: First, 1s 11½d; Second. 1s 10½d. Exeter: First, 2s 0d. Hereford: First, 1s 9d. King's Lynn: First, 2s 0d; Second, 1s 10d. Llandilo: First, 2s 0d. Mold: First, 1s 11d; Second, 1s 10d. Newport (Mon.): First, 2s 3d; Second, 2s 1d. Norwich: First, 2s 0d. Oswestry: First, 2s 1d; Second, 2s 0d. Penzance: First, 1s 11d; Second, 1s 10d. Saffron Walden: First, 2s 4¾d; Second, 2s 0d. St. Ives (Hunts): First, 1s 11d; Second, 1s 10d. Salisbury: First, 2s 2d; Second, 2s 0d. Skipton: First, 1s 11d. Truro: First, 1s 10d; Second, 1s 9d. Welshpool, First, 2s 0d; Second, 1s 9d. *Carlisle: First, 2s 0d. *Derby: First, 2s 1d. *Ipswich: First, 2s 3d; Second, 1s 9d. *Lincoln: First, 2s 0d. *Shrewsbury: First, 2s 0d. *York: First, 2s 0d; Second, 1s 11d.

FOWLS.

Per lb.—Birmingham: First, 1s 3d; Second, 9d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 4d. Hereford: First, 1s 3d. Llandilo: First, 1s 9d; Second, 1s 7d. Newport (Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 4d. Welshpool: First, 1s 6d; Second, 1s 4d. *Derby: First, †5s 0d; Second, †4s 0d *Ipswich: First, 1s 6d. *Lincoln: First, †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 6d. Second, 1s 4d. *York: First, †5s 0d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 1s 0d. Doncaster: First, †5s 6d; Second, †5s 0d. Exeter: First, 1s 3d. Hereford: First, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 9d; Second, 1s 7d. Welshpool: First, 1s 3d; Second, 1s 0d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 5d. *York: First, †5s 6d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, September 9th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

EG

Wednesday, September 16th, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN

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A POULTRY HOUSE

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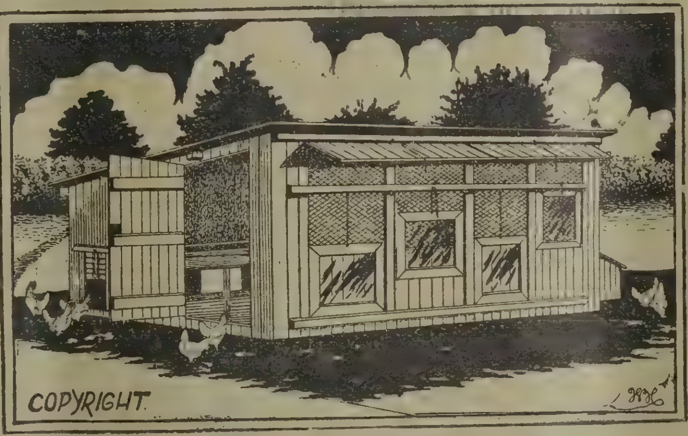
ferring to the illustration it ll be seen that the whole of e front of the "TRIUMPH" is voted to light and ventilation. ere are also windows at the ck. A wide dropping-board ns the whole length of the use, and a strong perch (or rches, according to the size of e house) above it. Convenient tside nest-boxes are fixed to the end of the house.



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	14 „	7 „	6 „	4*
	14 „	8 „	6 „	4*
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Gresham Road, Brixton, S.W.
Dear Sirs, Aug. 22nd, '25.

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Yours faithfully,
J. STEPHENS.

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EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, SEPTEMBER 16th, 1925.

Editorial.

FARMERS AND POULTRY—A PESSIMIST.

Mr. W. J. Malden contributes a weekly article the "Salisbury and Winchester Journal," titled "Practical Agriculture." We should not ve been aware of this had not a correspondent rwarded us a cutting from the journal, part of an ticle in which Mr. Malden strays from the path, r, instead of writing a practical article on Agri- lture, he writes very impractically on "Farmers d Poultry."

Beginning with the following very extraordinary atement, the accuracy of which we take leave to ubt, Mr. Malden bases his whole argument upon and while it may be very convincing to those o are unable to refute his extraordinary ideas, those who are in a position to do so it is premely ridiculous :—

> "To-day the corn merchants tell us that half the wheat grown in the country now goes to maintain poultry, hence the dear loaf, when only about 2,000,000 acres are grown."

Mr. Malden must be aware—if he is not he ould be—that by far the greater portion of the eat fed to poultry is unfit for milling purposes. entirely fails to inform his readers that the eater portion of a hen's food are the by-products, d in many cases the waste products, of cereal ains, and foods other than wheat, used for human nsumption. But for pure nonsense we have rely read anything to equal the following :—

> "The Ministry of Agriculture tells us that we ought to produce eggs to the value of £15,000,000, paid for those imported. The average per hen of eggs laid is agreed to be not more than 120 yearly, or one in three days; and on wheat alone it is held that it requires about 5 ozs. a day, with wastes, say 1 lb. in three days. There are 504 lbs. in a quarter, so 504 eggs; therefore, reckoning wheat at 50/- a quarter, the food costs a penny. The egg consists of 75 per cent. water, therefore a 2-oz. egg has ½ an oz. of dry matter available for food for man, against 1 lb. of wheat, less 15 per cent. of water, and 85 per cent. dry matter available."

This is a pure gem. All this juggling with gures is based on the fallacy that a hen consumes 5 ozs. of wheat a day, and is as pretty a piece of sophistry as it has been our lot to meet for years. Is Mr. Malden aware that a hen consumes other food than wheat? If he is, why did he write it? And if he is not, why did he write it? When it has been demonstrated, beyond the possibility of doubt, that poultry-keeping by farmers is certain to be most advantageous to them, when the National Farmers' Union is doing its utmost to induce the farmer to keep poultry on an extensive scale and under conditions which will make them a source of profit, compared with which nothing else on the farm will yield so well, we have individuals like Mr. Malden to put such fallacious arguments forward, which, as we said before, may prove very convincing, because so very plausible—to those who know no more than he does.

Then we come to the following :—

> "At the present price of food and labour cramming has declined to an infinitesimal degree as compared to what it was when I practised it in Sussex 25 years ago."

We presume Mr. Malden means the opposite to what he has said. He meant that cramming has seriously declined, but we doubt the correctness of his statement. The table poultry industry was very hardly hit during the war; it has steadily revived, and prices realised have fully compensated for the increased cost of food and labour.

> "Poultry farms are not run on the seven hours' day, nor 5½ days a week. Wages of a skilled man on the hours required are cheap at 42/- a week; at twopence per egg it requires 252 eggs to pay him, thus 13,104 eggs per year to pay him, that means that without any cost of rearing pullets, cockerels, deaths, etc., food for fowls, or expense of building and equipment, interest on capital, it takes the eggs of more than 100 hens laying 130 eggs a year to pay a man's wages."

Had Mr. Malden, before he devoted himself to this destructive criticism, visited Mr. Harding he would probably have hesitated before he used such an absurd argument as this. Mr. Harding would soon have convinced him that, however much satisfaction he may derive from his own elaborate theories, they are completely falsified in practice. Those of our readers who were fortunate enough to hear Mr. Harding's address on this subject at the Harper-Adams' Conference will be able to estimate at its true value the curious contribution of Mr. Malden, who has entirely neglected to inform the farmer, for whose benefit he is presumably writing, of the manurial value of poultry, and their value in clearing land of such pests as wire worm, etc., and more particularly would refer him to what Mr. Harding had to say in connection with his poultry and labour on the farm :—

> "The great drawback to the business is that the bulk of the eggs are laid when prices are lowest. It is because so few are laid at other times that higher prices are fetched on the smaller. Supposing that other £15,000,000 worth of eggs were produced, naturally through extra supply those highest prices would not be realised ; moreover, the prices of the others would be lowered, and 2d. average would not be maintained. Naturally I am aware that the average production could be raised, but this must be a matter of time. **Moreover, substitute foods could be found in the place of wheat."**

What an economist we have in the person of Mr. Malden. We conclude from his argument that it is better that £15,000,000 annually should be sent out of this country for poultry and eggs rather than that they should be produced here, and that if eggs to that value were produced here they would lower the average price, whereas if they are imported they will not do so. We think his concluding remark on the possibility of substitute foods for wheat betrays, more than anything we can say, the extent of his knowledge of poultry and poultry farming. It is amusing to read him on food calories. We thought the idea that value of a foodstuff was dependent on calories was exploded years ago, and if he wants to know anything as to the nutrient value of the egg, we shall be pleased to furnish with the necessary information. If our farmer friends have any doubt as to the value of the hen on the farm, we recommend them to study Mr. Harding's paper. They will possibly be more interested in the cash results than in the caloric value of an egg as compared with a pound of wheat.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely : Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year began on 1st September.

Modern Poultry Feeding.

By **TOM NEWMAN.**

PROFESSOR WILLARD THOMPSON'S PAPER.

(Continued).

With Professor Willard Thompson's axiom, "The simpler the combination, the easier the task of the poultry feeder," we shall all agree, careful, however, to see that in our efforts to lead the simple life, we do not regard essentials as luxuries. Before commenting on the mash formula given by Mr. Thompson, I would like to say something with regard to his second point :—

> "I believe it is usually conceded by poultry feeders that the nutritive value of the dry mash should be, as compared with the nutritive value of the dry grain, very narrow. The nutritive ratio for the ration above is approximately 1.2.75, depending upon the quality of the meat meal used."

There are points here worthy of consideration. I am not querying the suggestion that the nutritive value of the mash should be much narrower than that of the grain—of necessity it must be so; but I feel that the poultry feeder should be impressed with the knowledge that the value of his mash does not depend on its nutritive ratio. He should be impressed with the idea that the *mash is to supply the deficiencies of the grain*, and that under modern conditions—which preclude the finding of any of the natural foods by the hen—should, as far as possible, embody all the food constituents which are necessary for the health and well-being of his flock; and that his attention should be directed less to the nutritive ratio, the importance of which is in my humble opinion greatly over-estimated, than to the value of each constituent in the mash. I have mentioned this, because I have found in hundreds of cases that in the endeavour to arrive at a ratio narrow enough to bring the total ration to one of 1 to 4.5 in summer, and 1 to 5 in winter, it is the practice to considerably increase the animal protein, and in many cases with disastrous results. I cannot agree that a wider and narrower ration should be fed, in accordance with the seasons; the adjustment should be made with due regard to the birds' production and condition. However, that is beside the point. What I am trying to show is that the value of the ration depends, not upon the nutritive ratio, but upon the constituents used.

If we take the concluding sentence in the paragraph quoted: The quality of the meat meal would be measured by the protein content. Assuming it to be first quality, i.e., about 60 per cent protein, the ratio would be considerably narrower than if an average sample of meat and bone meal were used, but I have grave doubts as to whether the results, either as regards production or the health of the birds would be better. Certainly I have never obtained such good results with blood meal with its 72.00 crude protein s with a moderately good sample of meat and bone neal.

I have dwelt upon this point in rather a lengthy ashion, because it has some relation to the comments am about to make upon the mash. Let me here say gain that this article is not written in any critical pirit, but solely with the idea of maintaining the nterest and promoting discussion.

The mash, it will be remembered, consists of equal parts wheat bran, sharps, maize meal, ground oats, neat meal.

The cost of the mash is appreciably higher than that n general use in this country, due to the high pro-ortion of ground oats and meat meal used. Pre-umably the very high percentage of the latter is hought to be necessary in order to bring the total rotein content of the whole ration to what is thought o be desirable, for with the exception of the bran and harps, the protein content of the whole ration is poor n both quality and quantity. The Wellingham xperiments, as well as our practical experience, have hown us that a much smaller percentage of animal rotein can be used, with equally good results, as far s the production and health of the birds is concerned, fed in conjunction with good vegetable protein; and will be remembered that the best results in the Vellingham experiments were obtained with the pens d the lowest percentage of fish meal, i.e., 6 and 3 per ent. of the mash, the lower percentage giving the etter result. Presumably the lime phosphates are upplied in the form of green food, or the birds are n range, as the ration is very deficient in this respect. n many of our poultry farms this would spell disas-r, unless it was supplied in some other form, either lfalfa meal, fish meal, meat and bone meal, or by ome salt mixture such as that frequently given in ese columns.

We now come to another important point. Professor hompson refers to the "Kaupp Ivey" Digestive Co-ficients of Poultry Feeds and Rapidity of Digestion," hich were published in "Eggs" in 1922, and com-ented on at the time. Professor Thompson says:—

> . . . . . "I will point to only two as indicative of the fact that our conception of the real value of some of the ordinary foodstuffs to poultry feeding may be somewhat altered by an exact knowledge of their digestibility by fowls. As a first example they find that sharps is at the foot of the list in total digestible nutrients per 100lbs. As a second example we find that they suggest that wheat bran is very low in digestibility so far as poultry is concerned."

Now may I refer to the Kaupp Ivey Bulletin. The llowing extract is interesting:—

> "With the *exception* of wheat middlings, meat and bone meal, digester tankage, and blood meal, these tests show fowl are more efficient in the digestion of nitrogen free extract than in the digestion of crude protein or fat.
>
> The test suggests that the feed mixtures of poultry should contain relatively small proportions of such feeds as alfalfa meal, wheat bran, and wheat middlings."

On the face of it this is correct, but we find the laboratory tests utterly refuted in the field. In the Australian Laying Tests where records of production have never been equalled, the mash provided was:—60 per cent. middlings, 20 per cent. bran, 15 per cent. alfalfa meal, and, I believe, 5 per cent. meat meal. I am writing without reference, and the proportions may not be quite exact, but they are nearly so, and will serve the purpose of showing that these foods should not be so readily condemned because of a digestibility test made in a laboratory. With further reference to middlings, readers will remember the very remarkable results obtained in the Wellingham experiments three years ago, when the chicks were reared practically upon middlings and dried milk, the mash consisting of 70 per cent. of middlings, a small percentage of yeast extract, and dried milk. The chicks (90 in number) developed with remarkable rapidity, the mortality was less than three per cent., and they were markedly superior to another lot fed in the same way, except that oatmeal took the place of middlings. If we place too much reliance on digestibility tests, we shall find that the Sussex ground oat would not compare in value with maize meal, or barley meal, that fish meal must be a very wasteful food, for the tests show that only 54.23lbs in every 100 is digestible. That the common field pea is superior to soya bean meal, and buttermilk inferior to blood meal. All this we know to be wrong. Our practical experience has taught us that it is wrong, in spite of the tables, I affirm that good wheat middlings are the most valuable and economical food the poultry-keeper uses, and the food he would find it almost impossible to replace.

CORRESPONDENCE.

PROFESSOR THOMPSON'S PAPER.

To the Editor of "Eggs."

Sir,—As you invite your readers to state their views on the subjects discussed at the recent Harper-Adams' Conference, may I be allowed to make a few remarks apropos of the excellent and interesting paper by Professor Willard Thompson on "Practical Ration Making"?

For the sake of convenience and simplicity he divides the ration into parts, the two chief being grain feed and mash, in accordance with our usual custom in this country, and gives "Nutritive Ratios" as guides.

On the other hand, we are recommended to vary the amount of grain to "regulate the flesh and physical condition of the hen."

I feel sure that we are all in agreement with the Professor on this point, but does it not mean that, therefore, the "Nutritive Ratio" should be a variable, depending entirely upon circumstances, including weather conditions, season, and so forth, and that any useful experiment on the subject of protein must state fully the conditions under which it was carried out?

(Continued at Foot of Column on Next Page).

Angora Rabbit Wool Farming—IX.

By the **LADY RACHEL BYNG.**

MORE FEEDING HINTS.

Rabbit-keepers are always up against the problem of how to avoid waste. With clover hay at £6 the ton, as it is in the north, it is heartrending to see the hay strewn over the hutch floor, if fed **inside** the hutch, or scattered on the ground if fed in outside racks.

In hutches made after the Jans Senci pattern a vast amount of hay is nibbled into short lengths, which fall below the reach of the rabbits.

This short hay, mostly composed of pieces of clover, shaken to dust by the rabbits pulling at the hay through wire netting, can be collected in a large vessel. Boiling water should be poured over it. This mixture stirred into a mash and dried off with middlings and Sussex ground oats, or bran, is eaten by the rabbits with relish if served really warm.

Toast.—Scraps of toast, dried crusts, apple core, apple parings, cheese, are considered by most Angoras a great treat. Dry bread scalded and soaked in milk and hot water makes an excellent food for brood does with litters.

" FEEDING TIME."
Lady Rachel Byng with " Beverina " and her four babies of three weeks old.

Tit-Bits.—An Angora off its feed can often be tempted with tiny bouquets of assorted favourite greens, such as a few dandelion leaves, plantain leaves and clover, or a piece of parsley, pea pod, and shepherd's purse, or a leaf of Giant Chicory and a leaf of Thousand-headed kale.

The variety of tit-bits seems to tempt the anima to nibble, and when once tempted it often wil put it right without further remedies.

If fresh clover leaves, or dandelions, or groundsel or plantain fail to tempt, the Angora must nee medicine of one sort or another, and every attemp should be made to discover the cause of its indisposition.

Mashes.—Various mashes can be manufacture as pick-me-ups for putting on weight for Angora that have been run down either by excessive heat rearing a large litter, etc.

One of the mashes most appreciated is that composed of whole or shredded maize; soak the maiz or wheat in cold water over night, then let i come to the boil, and boil it for ten minutes til soft. Dry off with half middlings and half bran Another mash much appreciated is Uveco mixe with skim milk, or any of the advertised mil powders mixed with warm water (**not boiling**).

Cod Liver Oil.—If for any reason the rabbit seem to need rather more nourishment than usual a teaspoonful of cod liver oil to every twent rabbits mixed in any of above mashes makes very successful and appreciated tonic.

Another mash that has excellent results is composed as follows :—6 parts bran, 6 parts middlings 3 parts Sussex ground oats, 2½ per cent. fish meal

Yet another mash, and a favourite one, is :— ½ part barley meal, ¼ part middlings, ¼ part bran

Both the above mashes are mixed to crumbly dr condition with hot water.

When the following mash was fed to 25 adu Angoras for three weeks, 24 of them put o weight varying from 3 to 8 oz.; one lost 1 oz.:— 1 part Uveco, ½ part middlings, ½ part Susse ground oats, one tablespoonful milk powder, mixe with hot water to crumbly mash—one large tablespoonful fed every morning.

No experiment is able to find out the most suiable amount of protein for use in all cases, and seems that in a general way we can get very litt nearer the mark than by giving from 5 to 10 pcent. of " Good " protein, judged in accordan with our egg supply, our personal observation ar handling of our birds at any given period. If th is so, is it essential for a poultryman to wor about any particular gentleman's digestibilit tables?

I am, etc.,
J. LEWIS ROSEDALE.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

'BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

E. W. H. (Somerset) sends two samples of fish neal, and asks for an analysis and approximately he value of each per cwt. I regret we cannot undertake chemical analysis, this would be done by the county analyst, the fee I believe is 10/6. Of the two samples sent, that marked A is the better ; B has a slight excess of oil ; the price etail would be 24/- per cwt.

L. N. (Sheffield) wants to know how to feed birds when in the moult so as to get them to lay as soon as possible. This has been his trouble for ears. He has never succeeded in getting them into laying condition until well after Christmas. He has 30 R.I. Red pullets, some of which are moulting and some of which are laying. A great deal depends on the condition of the birds when they moult. Many poultry-keepers let their pullets get into such poor condition that they are a long ime in renewing their feathers, and some are so afraid of over-feeding that they retard the growth of the new feather. The best way is to feed normally, and should the birds hang in the moult add per cent. linseed meal to the mash, and feed rather more maize. Scratching exercise will prevent the birds becoming overfat.

B. D. S. (Gosforth). The fact that the hens eat the goats' secretions is some indication of a depraved appetite, but it is not likely to harm them.

T. B. (Bristol). This is the second time this week that I have been asked whether any advantage is likely to accrue from mating a single-comb Wyandotte cockerel to White Leghorn hens. As they say in the House of Commons, "the answer is in the negative." No advantage is likely to accrue, on the contrary, the complications will be many. Apart from some little improvement in stamina, "T.B." will gain nothing, and is likely to lose a good deal. There will be broodiness, for example, and smaller eggs. In answer to his second question, the breed most suitable for such a small area as he has at his disposal would be the White Wyandotte, and he is right in thinking that he would do better with only one breed.

A. O. C. (Solihull) writes :—"I have been breeding poultry for a few years, and have an excellent strain of White Wyandottes of great stamina. The egg yield is large, and they are of good colour, size, and hatchability. The female birds have been selected with the above points in view, and have been mated to unrelated cockerels which have been purchased from sources which I know to be breeding for the same points as myself. In no way have I in-bred or line-bred, and to this I attribute the good stamina of my birds. As I wise in so keeping the birds unrelated, and will the points enumerated be preserved in future generations by the present process? Is it a mere coincidence that the male birds purchased have produced stuff which has not shown signs of reversion to old defects, and which some say is the result of breeding out?"—"A. O. C." must be a new reader, or he would have known that I have repeatedly said in these columns that, in my opinion, line-breeding or in-breeding is a very great mistake as far as breeding for heavy egg production is concerned. My correspondent should remember this, that he has been breeding for a specific factor, which has resulted in the elimination of other factors, the breeders from whom he has purchased his stock cockerels have been doing the same thing, so that he is mating two strains which are pure for the same factor. It is not a pure coincidence that the male birds have produced stuff which has shown no signs of reversion to old defects, but "A. O. C." must always be very careful in the purchase of his cockerels, and see they come from dams carrying the factors for heavy egg production. It does not necessarily follow that the stamina of his birds is so good because he has not in-bred or line-bred. It is quite possible, if selection of made of exceptional stock, that these systems can be practised for years without loss of stamina, but as a general rule both fertility and hatchability suffer.

Spen (E. Yorks) sends a sample of Canadian feed oatmeal at £12 5s. per ton. It would be dear at half the money, as at least 30 per cent. of it would be indigestible. In reply to other questions, the Wyandotte hens which were mated to the Rhode Island Red male this season will throw pure Wyandottes if mated to a Wyandotte cockerel next spring. He could keep 35 Black Leghorns, intensively, in the house 12 x 10. The decline in his egg yield is purely seasonal; it would not be profitable to keep the 1923-hatched birds for another season.

G. L. D. (Beckenham) has received complaints as to tainted eggs, and asks if I can tell him the cause. He should be more explicit, and have let me had details of the feeding. The most probable cause is a sample of fish meal containing an excessive percentage of oil. With regard to his early March-hatched Leghorns, which began laying last month, I can suggest nothing which will prevent the neck moult except heavy feeding, particularly of grain. He will not compensate for immaturity in the pullets by mating them to a second-season male. I would strongly advise him not to mate Buff Rock pullets hatched last week in April next season. For pullets which he intends to keep intensively during the coming season, the following will be the best mash :—Bran and alfalfa meal 1 lb. each, middlings 4 lbs., ground oats, maize meal, and meat and bone meal 1 lb. each. This can be used as a wet or dry mash.

E. R. A. (Stoughton). We cannot reply to non-members of the S.P.B.A. by post unless a fee of 2/6 is paid. Membership of the S.P.B.A. entitles you to free advice by post. You tell me you only trapped during March and April, and ask if you can make any use of these records. Although not wholly reliable they will be of great assistance to you. Reject any bird that laid less than 32 eggs during these two months, all those which did better than this will, as a general rule, be found to be the best layers. If you use your records for these months, and carefully select your birds by handling and observation, you should have a fair idea as to the best birds in the flock. It would be inadvisable to use any of the cockerels you have for breeding next season, as you know nothing about them except they are of good strain, which means nothing for breeding purposes. No, strain doesn't count for much, it is individuality which counts. In rough weather confine the birds entirely to the house, it will easily accommodate 60 pullets. (3) Three vigorous cockerels would be sufficient to mate to 40 pullets. I consider a January-hatched Leghorn much more profitable than one hatched in March, not quite so profitable as one hatched in April.

Steve (Newcastle, S.). It is idle to suggest that this bird with feathered legs and a pea comb is a throw back. You say you paid 17/6 for a sitting of pure Leghorn eggs, and this is one of the birds from the eggs. He should have been honest and told you that the egg was probably put in by mistake. It is a mongrel, pure and simple. (2) I think you would be wise to give more wheat as grain, the oats are a very moderate sample, and it does not pay to feed anything but the best oats to poultry. (3) The Ancona is a very nervous bird, but your friend is wrong in saying they are poor winter layers. I know of some strains which have done as well as any Leghorns during the winter months. They would be as suitable for your purpose as the Black Leghorn.

Anxious (Bedminster). Thirty-five per cent. was certainly most disappointing. What a curious man you are to accept this loss through a whole season and not seek advice before. Even now I cannot say definitely what was the cause of the trouble, if we assume the eggs to have been all right—of that I know nothing. The most probable explanation would appear to be that you were running the machine at too low a temperature. Start next season at 105, reduce the following week to 104, and finish at 103. It would be well, too, to have the thermometers tested. (2) There would be no possible advantage in crossing Rhode Island Reds and Wyandottes. It is a sex-linked cross, it is true, that would be the only advantage, you could detect the sex of the chicks at hatching. (3) Undoubtedly it pays to place eggs under a hen for the first week and then put them in the incubator. No better results are obtained when you take them from the incubator and put them under the hen. These are ground oats, but not Sussex ground; at the price they are good value, and would answer your purpose as well as S.G.O.

BRITISH BARNEVELDER CLUB.

Nomination papers have been sent to all members for the forthcoming annual elections. If, through oversight, any member has been missed, he will receive a copy on application to the Secretary.

The Annual General Meeting will be held, by kind permission of the British Dairy Farmers' Association, in the club room at 10.15 a.m. on Wednesday, October 21st, at the Dairy Show. Any member who has not received the current Year Book is reminded that these are sent to paid-up members only. A copy will be sent on receipt of subscription due.

The support of members is very much desired in entries at the Harper-Adams', National, and Bucks County Laying Tests, where it is hoped to obtain sections for the breed if sufficient entries are obtained.

At the former two the club is again offering a guinea special for the highest scoring member's pen.

Yours truly,

E. D. BRODIE.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

IMPORTANT NOTICE.

The Annual General Meeting will be held on ednesday, October 21st, for details see page 194.

ELECTION OF OFFICIALS.—Three members the Council retire annually and are eligible for election. The retiring members are:—Miss addison, Dane Hill, Sussex; Mr. P. Hedworth ulkes, Pond Cottage, Virginia Water; Mr. J. H. wden, Heydown, Heathfield, Sussex. All are ering themselves for re-election.

NOMINATIONS FOR THE COUNCIL should be ceived by the Secretary not later than Wed-sday, September 30th. Voting papers will pear in the issue of "EGGS," dated October h, and should be returned to the Secretary not er than Wednesday, October 14th.

RESOLUTIONS to be submitted to the General eting must be received by the Secretary not er than Wednesday, September 30th.

TOM NEWMAN, Secretary,
Rudgwick.

IE REGISTER, BLOOD AGGLUTINATION TEST, ELECTION OF COUNCIL, ETC.

May I draw members' attention to the notice th regard to the Election of Council, resolutions the General Meeting, and the date of the meet- which appears above, and remind them that ndidates for the Council must be nominated and conded by a member.

I am instructed to draw members' attention to a solution passed at the May meeting of the uncil, which was as follows:—

> "That facilities should be given in the Register, for members to notify that their breeding stock had been blood tested, but that it should be conditional that **all breeding** stock on the farm should have been tested, and that a certificate signed by a qualified person should be sent to the Editor of the Register or the Secretary, which should also state the number of birds which had been tested."

At the Council meeting on Wednesday it was cided that birds entered in the Register must ve been tested within a period of six months. is latter decision is based on the knowledge that single test is not reliable.

SEVENTY.

A new record has been created—Seventy new members joined the S.P.B.A. during the last week in August. This, please note, not as the result of a campaign to secure new members, but just in the ordinary course of events. A greater tribute to the good work the association is doing could hardly be desired. The financial year ended on August 31st, and notices have been sent to every member that subscriptions are due. If any have failed to receive them, will they please accept this as a notice; and do remember, please, that the names of members whose subscriptions are not paid cannot under any circumstances be inserted in the Register. Each year I get a number of letters from unfortunates whose names have been omitted, because of their failure to pay up, and many of them seem to think they have a personal grievance. For example, one reminds me that we had tea together, at some time or another; a second that he met me at Mr. So-and-So's farm; a third that he has been a member for some years, and under the circumstances they think an exception might be made in their case. It never occurs to them that it is impossible for me to ask my assistants if any particular member has paid or not, and I cannot always remember everybody with whom I have had tea, or that we must conduct the work on business lines. The Council meeting will have taken place ere this is in print, and I hope to announce that some important and interesting business has been transacted.

NO ADDRESS.

Subscriptions to S.P.B.A. have been received from the following with no address enclosed, or no name. Will the senders kindly communicate with me if this should catch their eye:—

> P.O., value 5/-. Post Office, Killeshandra. Cheques ditto., signed Briden and Co., Edith A. Hunter, Alfred E. Cotton.

THE DEPOSIT SYSTEM.

I have received the following letter from Mr. W. N. Hough:—

> "I have just been reading with much interest the correspondence regarding the deposit system run by 'Eggs,' and the Revd. Goodwin Courtman's remarks on same.
>
> I should like to point out that I, as a member of S.P.B.A., have made full use of this system, and the discount allowed by some firms by doing so, and have NEVER found things as he states.
>
> Personally I have generally found much prompter attention when dealing through 'Eggs.' Only once had I to complain, and then you had the matter settled for me in an entirely satisfactory manner.
>
> My farm has practically been equipped through the Society, and I for one shall go

on making use of a good thing when it is found.

If some don't appreciate your efforts on members' behalf, many do. I'm one."

I think this finally disposes of the Revd. Goodwin Courtman's letter.

THE 1926 S.P.B.A. REGISTER.

We are now busily preparing the 1926 Register, and hope to make it at least as good as those that have preceded it. We have already received promises of some articles from the pens of experts which will prove most useful and interesting to our members. We shall be glad to consider any articles of permanent interest from our members, those dealing with personal experiment will be most acceptable. The forms for the Registration of Pens are now ready, and will be sent on application. We would ask our members who wish to register their pens to read most carefully the full instructions sent out with the forms, and to note that only pens which exactly conform to the rules can be accepted. If this is carried out, much time and annoyance will be saved. Each year the Editor has to send back a number of forms which are incorrectly filled in, or which do not comply with the rules, and this causes delay and oftentimes disappointment. The forms when filled in should be sent to the Editor as soon as possible, and **in no case** can Registration Forms be accepted **later than October 16th.** All applications for Registration Forms should be sent to Rev. H. Mudie-Draper, 25, The Chase, Clapham Common, S.W.4.

COUNCIL MEETING.

The monthly meeting of the Council was held at S.P.B.A. Offices at Rudgwick, on Wednesday, Sept. 9th. The President, Mrs. Hunter, was in the chair Present:—Miss Maddison, Mr. J. G. Kitson, Mr. John Smart, Mr. E. Bostock Smith, Mr. Lester Spurgeon, Mr. A. Harold Paine, Mr. J. H. Dowden, Mr. E. J. Meekings, Mr. Fletcher Hearnshaw, the Treasurer and Secretary.

Secretary's Report.—The Secretary reported that 98 new members had been enrolled during August. This was a record for the month. The resolutions presented by the delegates of the S.P.B.A. had been adopted by the National Poultry Parliament. New members were coming in very rapidly.

Treasurer's Report.—The Treasurer submitted his report, which was declared satisfactory, and adopted on the proposal of Mr. Bostock Smith, seconded by Mr. Hearnshaw. It was agreed that the annual balance sheet should be published in "Eggs" before the general meeting, and should be circulated at the meeting.

Wellingham Experiments.—The Secretary reported that he had visited Wellingham, with Mr. Meekings on the 7th inst. The birds in the intensive experiment were suffering from autumn colds, and egg production had suffered. They were of opinion that the birds had suffered a great deal during the heat wave in July, and it would be necessary to make certain alterations to the house to avoid this another year, more particularly with regard to the roof, which, it was suggested, should be lined with three-ply wood. Except for the colds, everything was satisfactory, the birds were remarkably well developed. With regard to the Light Sussex, which were fed on the special mash, which had been formulated by the Secretary, the pullets were especially well grown, were in full lay, and the size of the egg was very satisfactory, the large majority being 2ozs. or over.

Extending Experiments.—Mr. Meekings moved "That the time has now arrived, when, in the interest of members, the Association should start its own experimental farm." In moving the resolution, Mr. Meekings said that practical experiments would be of the greatest value to members, and he could see no way in which the Council could more wisely spend the money which was at present earning a moderate interest. They could begin in a modest way, and the experiments could be of such a nature that even if they were not self-supporting, the charge on the Association yearly could not be a heavy one, and their members would appreciate the efforts made on their behalf. He hoped that the Council would accept the resolution, and that an effort would be made to obtain land at Rudgwick, so that the work could be under the direct supervision of the Secretary.

Mr Bostock Smith seconded the resolution. He was confident that valuable work would be done for members, and there could be no better way of using thei money. He thought it advisable that the farm shoul be at Rudgwick, under Mr. Newman's supervision.

Mr. Kitson spoke in support of the resolution, an asked the Secretary whether he knew of any lan which could be obtained in Rudgwick likely to suit th purpose.

Mr. Newman replied that he knew of none at tha time.

Several other members spoke in support of the resolution, which was then formally put to the meeting and carried unanimously.

Mr. Meekings then proposed that a committee b elected, with power to act, and authority to spend sum not exceeding £500. This was agreed to, and th following were elected members of the committee:—Miss Maddison, Mr. Foulkes, Mr Spurgeon, Mr Meekings, Mr. Bostock Smith, Mr. Dowden. Th Secretary was instructed to make enquiries in Rudgwick as to suitable land.

General Meeting and Dinner.—It was decided tha the General Meeting should be held on the Wednesda of the Dairy Show week. In accordance with the wis of the members, it will not be held in the Agricultur Hall. Many of the members present had desired th a dinner should be held. The Council unanimous agreed that this should be so, and Mr. Kitson, at th request of members, kindly consented to find a suitab place for the dinner and general meeting, which w agreed should be held on the same day and in th same place, Mr. Kitson, Mr. Bostock Smith, and th Secretary to form the Dinner Committee.

Food Purchase Scheme and Discount System.—The Secretary said that a large number of membe were now taking part in the Food Purchase Scheme, and it was giving general satisfaction. Twenty firms were now acting for them, in their different areas, and he was pleased to say that the firms were doing their utmost to co-operate with them. Two firms had been struck off the list because they had not conformed to the samples which had been approved. The total value of foods and appliances which they had purchased for their members for the financial year ending August 31st, was £25,567 9s. 9d. This has been a great strain on the staff, but the work had been accomplished in a most satisfactory manner.

Election of Council.—The three retiring members of the Council are Miss Maddison, Mr. P. Hedworth Foulkes, and Mr. J. H. Dowden. All are eligible, and are offering themselves for re-election.

Date of next meeting was fixed for Wednesday, October 7th.

APPLICANTS FOR MEMBERSHIP.

Shipley, Mrs., c.o. Miss Maddison, Brookside, Dane Hill, Sussex.
Murray, K. A., College P.F., Roydon, King's Lynn.
Mathews, G., 14, Park Crescent, Worthing, Sussex.
Preece, Capt. D. G., Albright Hussey P.F., near Shrewsbury.
Walker, J., 3, Hart Street, Droysden, Manchester.
Smith, Miss L., Lynwood, 18, Magdalen Road, Bexhill-on-Sea.
Porrett, H. J., Pan-y-lan P.F., Launcells, Stratton, N. Cornwall.
Jones, J., Sunnyside Bungalow, Llanfair P.G., Anglesey.
Wharton, Miss L., Powerham Lodge, Spital, Chesterfield.
Lee, H. N., Newark House, Hempsted, Gloucester.
Gardiner, R., "Stanroyd," Paxton Road, Churchdown, Glos.
Robinson, A., 14, Scylla Road, Peckham Rye, S.E.15.
Pearcey, Miss D. S., Kemendine, Dacres Road, Forest Hill, S.E 23.
Stuttard, F., 2, Greenfield Road, Small Holdings, Townley, Burnley.
Laxton, W. P., Tattersalls, Knightsbridge, London.
Bryant, Mrs., 12, Holder's Road, Amesbury, Salisbury.
Thompson, S. T., "Durlston," Durrington Lane, High Salvington ,near Worthing.
Warren, H., Upwey, 181, Baldock Road, Letchworth, Herts.
Carson, W., "Glen Morag," 2nd Larkfield Road, Greenock.
Hudson, Capt. R. G., The Bungalow, Burnham Norton, King's Lynn.
Botting, W. J., 57, Victoria Street, Whitstable, Kent.
Artus, F., Tudor Lodge, Hadleigh, Essex.
Smith, P., Shipton Downs, near Burford, Oxfordshire.
Gledhill, W., 55, Well Meadow, Flowery Field, Hyde, Cheshire.
Corby, T. J., The Kiln Road P.F., Thundersley, Essex.
Boulton, O., Mousefield, Newbury, Berks.
Poingdestre, Miss A., 14, St. Michael's Road, Bedford.
Haigh, P. N., The Grove, Stainland, near Halifax.
Rynd, D., Snows, Nazeing, Essex.
Morgan, E. E., 6, Long Oaks Avenue, Uplands, Swansea.
Dean, Mrs., Allandene, Lomond Grove, Moreton, Cheshire.
Exley, N., Main Street, Esholt, near Shipley, Yorks.
Lavelle, J. A. Tullygally, Lurgan, Co Armagh.
Alexander, J., Glengorm, Kirkton Avenue, East Kilbride, Lanarkshire.
Dawson, J. A., High Street, Laurencekirk.
Parke, A. E., Edgehill, Wadhurst.
Hemsley, F., North View, Wadhurst.
Rosedale, Mrs., The Hermitage, Wadhurst.
Harvey, Capt. W. F. J., Bungtore Cottage, Rudgwick, Sussex.
Donaldson, D., East Angrove, Great Ayton, Yorks.
Quinn, G., Albert Road, Croydon, Surrey.
Forsyth, F., 27, Canning Road, Croydon, Surrey
Ladyswalk Poultry Farm, Ltd., Amport, Andover.
Dudley, H. E., Baronmead P.F., Rotherwick, Basingstoke, Hants.
Hammond, A. J., Plas Newydd Home Farm, Llanfair P.G., Anglesey.
Jebson, G. H., Lidgett Lane P.F., West End, Skelmanthorpe.
Wilson, E., The Bungalow, Petterton, Berwick-in-Elmet.
Lister, Mr., Blindley Heath, South Godstone, Surrey.
Blake, C. F., 6L, Lennox Road, Walthamstow, E.17.
Wadsworth, Mrs., Towe's Hill, Magheragall, Lisburn, N. Ireland.
Thomas, J. H., Cedar Cottage, Inscombe, Dawlish, Devon.
Smith, E. D., Stanley Lodge P.F., Kempshott, near Basingstoke.
Nedwell, Mrs. M., Dairy and P.F., Coolshinney, Magherafelt, Co. Derry.
Pierpoint, R., Daleshurst, Dalestorth, Mansfield, Notts.
Nind, P. W., Godshill, Fordingbridge, Hants.
Hawthorn, G. H., 146, Sovereign Road, Coventry.
Dalton, R., Glen View Cottage, Sheffield Lane Bottom, Ecclesfield.
Marsh, F. R., Hurst House, Heskin, near Chorley.
Wright, C. C., Huithwaite Bank P.F., Thurgoland, Sheffield.
Bonwick, A. F., "Temsvue," The Chase, Leechapple Lane, Oxford Street, Laugdon Hills.
Golden, Mrs. F. Caffin-, The Hawthorns, Portsmouth Road, Woolston, Southampton.
Best, F. A., Westerland, near Paignton, S. Devon.
Mardell, W.C., Brayscroft, Willian, Herts.
Leisham, Mrs. E. S., Broomrigg, Sarisbury Green, Hants.
Revill, Albert, 24 Wilkin Street, Clitheroe, Lancs.
Buckley, J. H., Holmwood, Spurstow, Tarporley

KEIGHLEY AND DISTRICT BRANCH.

The Third Annual General Meeting was held in the Temperance Hall, Keighley, on September 2nd. Mr. Fred Slee presided. There was a very good attendance. The minutes of last general meeting were taken as read, confirmed, and signed. The Treasurer reported a balance in hand and in the bank of £16 17s. 6d., also £50 invested in the Yorkshire Federation Laying Test. The Secretary's report went to show that the society continued to make progress. There were still over one hundreds members, although several members had left the district and fallen out of the ranks. The following officials were elected :—Hon. President, Mrs. Clay, M.B.E., Long Preston; President, Mr. Frank Snowden, Cowling; Vice-Presidents, Messrs. F. W. Smith, Harold Walker, and Alf. Sawyer; Hon. Treasurer, Mr. H. Butterfield, Denholme; Hon. Secretary, Mrs. Wilson, Denholme; Hon. Auditors, Messrs. H. Dixon and Watson M. Walker; Delegates to the Yorkshire Federation Council Meetings, Mrs. Clay, Mrs. Wilson, Messrs. F. Snowden, H. Walker, and A. Sawyer. Committee elected were : Mrs. G. M. Barker, Miss Marsden, Miss Stott, Messrs. F. Slee, H. Buckley, Joe Hey, S. Preston, G. H. Feather, S. Hartley, Ed. Hodgson, H. Reynard, S. Naylor, J. H. Brayshaw, T. W. Wilson, J. Paget, and F. Newiss.

On the proposition of Mr. Reynard, seconded by Mr. J. H. Brayshaw, and which was unanimously agreed to, the Secretary was instructed to write to Mr. Frank Snowden and congratulate him on his election to the Executive Committee of the National Poultry Council, and assure him that the members appreciated the honour reflected on the society by the election of their President to such an important position.

It was resolved that an addition be made to Rule 3, namely: "That members of the S.P.B.A. residing outside the fifteen mile radius covered

(Continued at Foot of Column Next Page).

The Cure & Prevention of all Diseases of Poultry associated with their Respiratory Organs,

Known As

COLDS, CATARRH, OR ROUP, DIPHTHERITIC ROUP, MOUTH CANKER, BIRD POX, OR CONTAGIOUS EPITHELIOMA, Etc.

By **ALBERT H. BRAIN.**

CHAPTER I.

As a practical specialist, working for many years in trying to investigate problems which means so much to the poultry-keeper—whether he or she be of the Poultry Farming class or a small poultry-keeper—it has always been my object to pursue such lines of reasoning and investigation for the prevention and treatment of disease, that were not only logical and informative, but easy and simple to apply, and above all, economical. Let me say here, and now, that I do not pose as a Scientist, though it is admitted that nearly all my work is guided along scientific lines, in conjunction with absolute personal practice in the field or poultry house.

My first real incentive to try to find a cure, and, if possible, preventive for all such diseases associated with Roup, followed the devastating outbreak we had at the Midland Laying Test during 1919, 1920 and 1921 During that time we tried every known form of treatment of Diphtheritic Roup and Bird Pox, etc., including inoculation, serums, and vaccines, from America, Holland, Belgium, France, and besides a few sent from private sources in our own country.

Not one of these specifics proved entirely satisfactory, the cost in most instances proving prohibitive from a commercial standpoint.

The best of the vaccines and serums did not provide immunity from simple colds or catarrh, nor will anything else if the birds happen to be in contact for any length of time with draughty or poorly ventilated housing, which predispose such a condition of Roup.

Among young stock, where always we find a tendency to crowd, an outbreak of colds is always to be feared, and it is from this source that the more highly malignant from of Diphtheritic Roup, Canker, and Bird Pox type develop. The latter cases are what are termed the Dry Roup family, and are the worst and most formidable type to combat, particularly if allowed to get well settled in a flock.

The wet roup stage includes the early stages of the disease, such as Colds or Catarrh, as indicated by frothing eyes, running nostrils, saliva thickening in the throat, followed by swollen face or eye roup, which can only be cured by removing from the housing and roosting conditions which are undoubtedly causing the trouble. Wet Roup is not contagious, but its development to the dry state is, and severely so.

Any poultry-keeper who is getting continual cases here and there of Wet Roup, should immediately have his poultry housing investigated. Maybe such trouble only occurs at certain stages of the year when the trade winds are blowing in a certain direction, as t cause increased draught in the pen.

The method of housing and ventilation, particularl where large flocks are kept together, cannot be studie too closely, or their manufacture made too carefull Well-matured dry timber of no less than ¾in. thicl ness (better to use 1in., by far), closely tongued an grooved, and tightened by clamping each sectio before nailing on to the cross members is importan Walls with timber that opens after it has been stanc ing some time, leaving nicks and crevices for draugh to pierce through, is folly of the worst kind, and wi have to be paid for sooner or later.

Many people do not appear to worry over such. The say: "Oh, well, we intend to nail felting all alon outside when the bad weather comes," and generall wait until they are in trouble. Personally, I do nc like the house that has to be felted outside, fc between the felt and timber walls of old houses have seen millions of red mite congregate and live. W know where these fed at night, and why many flock are not producing the eggs they should do, why th birds always appear to be light in weight, why the never look really fit and abundantly healthy, alway on the anaemic or debilitated side, etc. The red mit and body lice will generally tell you why; if not these the other type of parasite, which are living o thousands of our birds to-day I refer now to th intestinal worm, a subject on which I will be mor explanatory later.

It is mentioned now because of the many cor tributory causes to ill-health in stock, which mean fc so much non-success in many places, people who ar losing money at the business, and will not be wis enough to seek advice until it is too late.

How many people who have lost their all and gon out of the Poultry Farming business, that could hav been saved, 90 per cent I say, if they had only bee alive to the real matters in connection with the birds, and after all it is the continuous good healt conditions of the flock on every farm which determin the results shown on the profit side of the balanc sheet each year. See the numerous cases of sickl chickens of some farmers each year, the long droop

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S.P.B.A.—Continued.

by the branch would be accepted members to th branch on the payment of a subscription of 5/ per annum."

It was decided to accept Mr. Percy Wainwright' offer to come and lecture on October 7th. Hi subject will be "True Utility." The date fixe for Miss Hillaby's visit was February 3rd, 192 Her subject offered was "Successful Poultr Keeping."

Seven new members were elected for membe ship.

A Black Leghorn cockerel given by the Secre tary for a guessing competition during the ever ing resulted in the sum of 13/9 being added t the Show Funds.

Votes of thanks were tendered to all official for their services rendered.

(Mrs.) A. WILSON, Hon. Sec.

ng wings, short-backed specimens, and the reader gets to grip with the bogey at once.

Having set out to study the whole course and development of the trouble, and with the aid of splendid help and advice from noted pathologists and bacteriologists, I began to formulate a system of cure that held out the greatest hope, one that ultimately evolved itself into the present Visol method of treatment.

When called in to handle the outbreak on Mr. Toovey's farm, I did so with the utmost confidence, for those associated with me knew so well how speedily the disease could be brought under control and cured, if only the whole job was treated correctly along organised systematic lines.

Having about 6,500 birds with which to deal (over 2,000 had died when I took over), over 70 per cent. being more or less affected with every stage of Roup disease, the rate of the increase of the disease bid fair to wreck the whole farm, had it gone on for another month. Obviously, there was no time for individual treatment. What had to be done had to be done swiftly.

A mass attack was made, and that is one of the principal points of usefulness of the Visol method: One that is designed for use as flock treatment, and so will save time and extra labour.

Within a few days of getting to real work, improvement all round was conspicuous, and by the end of the third week the accumulative rate of progress had completely conquered the deadly scourge of Avian Diphtheria and Bird Pox, and Visol had won through its biggest victory since it began its conquest of Diphtheritic Roup and Bird Pox a few years ago, first in minor cases, until undefeated it has destroyed the Diphtheritic Virus, wherever it has been used.

It is surprising the ignorance that prevails in this matter. Since publicity has been given to Mr. Toovey's outbreak, I have been inundated with letters appealing for practical information on how to distinguish the different forms of Roup and its development. Many people have gone astray in their calculations, because of their failure to differentiate even between ordinary mouth ulcer and diphtheritic canker, or the wart-like scab on the face and wattles, and Bird Pox

As we go along I will endeavour to describe the differences, but first of all let me say that the origin of all diseases of the respiratory organs is, in the beginning, Cold or Simple Nasal Catarrh. In order to emphasise the importance of removing the contributory causes, first of all I am going to mention these now.

The causes contributing to this ailment—at first so simple—may generally be found in the system of housing.

Insufficiently ventilated pens, or, on the other hand, over ventilation, where cold air sweeps continually across the birds, either while they roost or in floor draughts, catching them from all sides, cause running nostrils, and if these are not attended to, quickly clog, inflammation of the membrane sets up, and finally results in roup. Why this is more subject to pernicious development among poultry than similar ailments among human beings, the reader will soon learn.

It is necessary here to make an introduction explanatory to the above from a biological standpoint. It is widely known that all species classed as Aves (bird-life), in which our domestic fowls are classed, possess no sweat glands. Thus being unable to perspire, they have to rid their blood of impurities in other ways, chief among these being the respiratory organs. In this manner, by the process of oxygenation of the blood, the serous blood traversing the lungs and emitting the poisons to these organs, will release them through the respiratory system of exhalation to be passed off as Carbon-dioxide and other gases into the air.

Birds having no other opportunity such as we have of getting rid of their blood impurities, through their skin by perspiration, Nature in her mechanical design affords but one method of escape, and that through the respiratory organs, nostrils and mouth

(To be Continued).

THE MIDLAND LAYING TEST.

As announced in our advertisement columns last week, the Seventh Midland Laying Test will begin on Monday, Nov. 3rd of this year, and finish on October 2nd of next year. The latest date that entries can be received (prospective competitors should note this) is Thursday, October 15th. This is the last test to be held on the old ground at Handsworth, where some very wonderful records have been made. The next one will be on the new test ground, with an entirely new plant. which will be right up to date One hundred pounds in prize money, gold, silver and bronze medals is to be awarded All communications should be made to Mr. A. H. Brain, 63, Old Meeting Street, West Bromwich.

THE "SERIAL" TEST, SKEGNESS, 11th MONTH.

Exhibition Section (Standard Bred), A.V.—1st, S. Outhwaite, Exchequer Leghorns, 838 eggs; 2nd, J. B. Hardcastle, Flower Birds 629 eggs; 3rd, Major R. G. Mundy, Light Sussex, 585 eggs.

White Wyandotte Section (Six Pullets).—1st, H. Lee, 1,092 eggs; 2nd, F. C. Tomlinson, 973 eggs; 3rd. A Snowden, 957 eggs.

Rhode I Red or Light Sussex Section.—1st, Mrs. D. E. Greenslade, 864 eggs; 2nd, A. Snowden, 828 eggs; 3rd, R. B. Dobson, 620 eggs.

White Leghorn Section.—1st, F. C. Tomlinson, 1,025 eggs; 2nd, H. Ashton, 931 eggs; 3rd, A. Snowden, 961 eggs.

A.O. Variety.—1st, P. Jarvis, Buff Rocks, 748 eggs; 2nd, W. Rowe, Barnevelders, 771 eggs; 3rd, F. C. Tomlinson, Black Leghorns, 675 eggs.

Small Breeders (Heavy Breed), Single Bird.—1st, Miss Tallis, Australorp, 219 eggs; 2nd, J. K. Peach, R.I.R., 187 eggs; 3rd, B. Franklin, W Wyandotte, 144 eggs.

Small Breeders (Light Breed), Single Bird.—1st. C. Carruthers, W. Leghorn, 210 eggs; 2nd, E. J Stone, W. Leghorn, 194 eggs; 3rd, B. Franklin, W. Leghorn, 173 eggs.

Best Individual Bird Scores for the 308 days are:—1st, A. Snowden, W. Wyandotte, 251 eggs; 2nd, H. Lee, W. Wyandotte 236 eggs; 3rd, H. Lee, W. Wyandotte, 204 eggs.

The Best Individual Bird Scores for the last 28 days are:—Nos. 14, 195, 222, and 262, with 25 eggs each; 187 and 120, with 24 eggs each; and 25 per cent. of the remainder with 20 and upwards, and a flock average of 14.62.

YORKSHIRE FEDERATION INTERNATIONAL LAYING TEST, HELD AT OTLEY.

First ten positions at end of eleventh month for Cups and Specials offered to members of Keighley and District Branch of the S P B.A., Class C.:—

Section 9 Any Variety Light Breed.—1, W. Wharton, Keighley (W.L.), eggs laid 226; 2, J. and W. Brayshaw, Lees Moor, Keighley (W.L.), 219; 3, S. Hartley, Haworth (W.L.), 208; 4, B. and W Atkinson, Thornton (Bf.L.), 209; 5, Wright and Fortune, Keighley (Ex.L.). 202; 6, W Thompson, Keighley (Blk.L.), 204; 7, J. Paget, Keighley (W.L.), 179; 8, J. Fisher, Cowling (Blk. L.), 185; 9, S Preston, Haworth (W.L.), 171; 10, H. Kershaw, Keighley (W.L.), 206.

Section 10. Any Variety Heavy Breed.—1, H Downsbrough, Bradshaw, Halifax, eggs laid 241; 2, Mrs. Hawksworth, Pool (W W.), 197; 3, Alf. Sawyer, Crosshills (R.I.R.), 190; 4, H. Downsbrough (W.W.), 204; 5, J. Brown, Glusburn (RI.R), 166; 6, Mrs. G. M Barker, Cullingworth (W.W.), 191; 7, Wright and Fortune, Keighley (W.W.), 170; 8, Ellis Mawson, E. Morton (R.I.R.), 189; 9, Tom Marks, Oakhill, Somerset (L.S.), 192, 10. Fred Slee, Keighley (Bf.R.), 161

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, SEPTEMBER 11th, 1925.

GRAIN AND FEEDING STUFFS.—New British wheat is in fair supply and slightly cheaper at London and Hull. the average quotation being about 11s. 8d. per cwt. as compared with 12s. in the corresponding week of last year, while samples suitable for seed purposes make 12s. to 13s. per cwt. at London. Fine samples of new English malting barley are scarce, and at London realise up to 20s. per cwt., while other samples make 13s. 9d. to 18s. 9d. per cwt. New crop home-grown oats are sparingly offered at most markets, but are cheaper on the week, prices at London declining to 9s. 10d. for white varieties and to 9s. 4d. per cwt. for black oats.

Imported wheat is in moderate demand and prices mostly record little alteration on the week. Foreign barley maintains recent prices at Hull and Liverpool, but at other markets most descriptions meet a dull trade at easier rates. A moderate demand exists for imported oats and quotations have an easier tendency. Maize is again cheaper at all markets, the average price for Argentine being about 10s. per cwt. as against 10s. 7d. a week ago.

Millings offals are mostly unchanged in value, but at London bran and coarse middlings, owing to a good demand, have advanced 2s. 6d. per ton. Coarse middlings are also dearer at Bristol. Maize products have declined in sympathy with the lower prices ruling for maize, and barley meal is also cheaper. Oil cakes meet a slow trade, and at London are from 2s. 6d. to 7s .6d. per ton cheaper on the week.

MILLERS' OFFALS.—Bran (British): Bristol, £7 15s; Hull, £7 2s; Liverpool, £7 10s; London, £7 5s. Broad Bran: Bristol, £9; Hull, £8 12s; London, £8 10s. Middlings—Fine (imported): London, £9 7s; Coarse (British): Bristol, £10; Hull, £9 5s; Liverpool, £9; London, £8 5s. Pollards (Imported): Bristol, £8; Hull, £7 5s; Liverpool, £7 10s, London, £7 5s. Rice Bran: Bristol, £7 17s; Liverpool, £7 5s. MEAL.—Barley Meal: Bristol, £11 10s; Hull, £11 8s: London, £12 2s. Maize Meal: Bristol, £11 15s; Hull, £10 17s; Liverpool, £11 10s; London, £12 5s. Maize Meal (S. African): Bristol, £11; Hull, £9 17s; London, £9 15s. Maize Germ Meal: Hull, £10 15s; London, £10 5s. Maize Gluten Feed: Bristol, £11 15s, London, £10.

EGGS AND DEAD POULTRY.

Week-end Prices--Eggs (per 120): British, 20s 3d, 17s 0d; Irish, 19s 6d, 18s 6d; Danish, 19s 6d, 18s 3d; Dutch, 20s 0d, 18s 9d; French, 19s 6d, 18s. 6d; Belgian, 18s 3d, 17s 3d; Italian, 17s 6d, 16s 6d; Lithuanian, 15s 0d, 14s 0d: Polish, 13s 0d, 12s 0d; Chinese, 13s 6d, 12s 0d; Russian, 13s 6d, 12s 6d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish, 1s 1d, 1s 0d; Others, 1s 6d, 1s 1d. Ducks, 1s 4d, 11d. Geese, 1s 0d, 10d.

EGGS.

Per Doz.—Ashford: First, 2s 3½d; Second, 2s 2d. Birmingham: First, 2s 1½d; Second, 2s 0d. Bridgwater: First, 2s 4d; Second, 2s 3½d. Chelmsford: First, 2s 0½d; Second, 1s 11½d. Colchester: First, 2s 3d; Second, 1s 10¾d. Doncaster: First, 2s 3d; Second, 2s 1d. Dorchester: First, 2s 2½d: Second, 2s 2d. Exeter: First, 2s 0d. Hereford: First, 1s 10d. King's Lynn: First, 2s 0d; Second, 1s 10d. Llandilo First, 2s 1d; Second, 2s 0d. Mold: First, 2s 2d; Second, 2s 0d. Montgomery: First, 1s 10d. Newport (Mon.): First, 2s 3d; Second, 2s 1d. Norwich: First, 2s 1d. Oswestry: First, 2s 2d; Second, 2s 1d. Penzance: First, 1s 11d; Second, 1s 10d. Saffron Walden: First, 2s 3½d; Second, 2s 1¾d. St. Ives (Hunts): First, 1s 11d; Second, 1s 10d. Salisbury: First, 2s 4d; Second, 2s 3d. Skipton: First, 1s 11d. Truro: First, 1s 10d; Second, 1s 9d. Welshpool: First, 2s 1d; Second, 2s 0d. *Carlisle: First, 2s 0d. *Derby: First, 2s 1d. *Ipswich: First, 2s 3d; Second, 1s 9d. *Lincoln: First, 2s 3d. *Shrewsbury: First, 2s 3d; Second, 2s 2d. *York: First, 2s 3d; Second, 2s 2d.

FOWLS.

Per lb.--Birmingham: First, 1s 3d; Second, 10d. Doncaster: First, †6s 0d; Second, †5s 0d. Exeter: First, 1s 4d. Hereford: First, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 7d; Second, 1s 5d. Newport (Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 4d. Welshpool: First, 1s 5d; Second, 1s 4d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 6d. *Lincoln: First, †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 6d: Second, 1s 4d. *York: First, †5s 0d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 3d; Second, 1s 0d. Doncaster: First, †6s 0d; Second, †5s 0d. Exeter: First, 1s 3d. Hereford: First, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 7d; Second, 1s 6d. Welshpool: First, 1s 3d; Second, 1s 0d. *Derby: First, †4s 6d; Second, †3s 6d. *Ipswich: First, 1s 5d. *York: First, †5s 6d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"Eggs."

Wednesday, September 16th, 1925.

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Contributions.—The Editor will always be pleased to cons contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existenc "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Bees Rudgwick, Sussex.

All communications with regard to Advertisements should addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe St London, S.E.16. Telephone: HOP 894.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it imperative that new advertisements and alterations are rece by FIRST POST ON FRIDAY MORNING to ensure insertion in following Wednesday's issue. It is hardly necessary to add the earlier in the week we receive copy the better it is for ev one concerned.

PROOFS.—We cannot guarantee to submit proofs unless plete copy is to hand by FIRST POST ON THE MON PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISS

ANNUAL GENERAL MEETING AND DINNER.

At the last annual meeting of S.P.B.A. certain defi questions were put to the members, which were very decide answered. First, it was clearly the opinion of all present t the meeting of 1925 should not be held at the Dairy Show, equally emphatic was the reply to the second question, that meeting should be held during Dairy Show week, later in afternoon than usual. Further, there was a hope expressed t arrangements might be made for holding a dinner.

The Council has accordingly acted on all these resoluti and has pleasure in announcing that the Annual General M ing will be held in "The Council Chamber" of the Holb Restaurant (entrance from Newton Street) on Wednesd October 21st, 1925, at 4.30 in the afternoon precisely.

Following the business meeting, a dinner, at which M Hunter, President of the S.P.B.A., will preside, will be in the King's Hall, of the Holborn Restaurant. Reception 6.30. Dinner at 7 p.m. Tickets will be 10/6 each, exclusive wines, but including all tips to waiters, head waiter, and w waiter.

It is earnestly requested that early application be made tickets, as a heavy demand is expected, and accommodatio limited to about 250 seats. Tickets will be posted on Oct 14th. It may be impossible to comply with applications recei after that date. Until it is found how many members wish attend the dinner, it will not be possible to arrange for t to bring guests. Application for tickets to be made to

Mr. TOM NEWMAN, Rudgwick, Sussex.

Envelopes to be marked "Dinner."

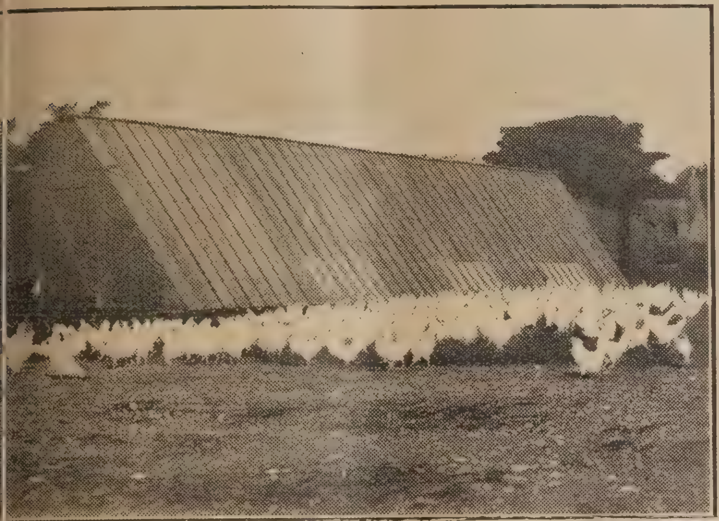
Cheques or postal orders must accompany applications tickets. All applications will be dealt with strictly in rotat

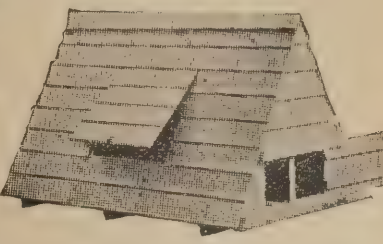
Morning dress will be worn.

Fowls be Housed, including Nesting accommodation, at 4/6 per Bird ?

THEY CAN BY USING

A SUPER "APEX" as shown below.





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I can remember one being put on the market similar to the small illustration as far back as 1900 by the well - known Randolph Meech; this was then generally made 6 ft. square.

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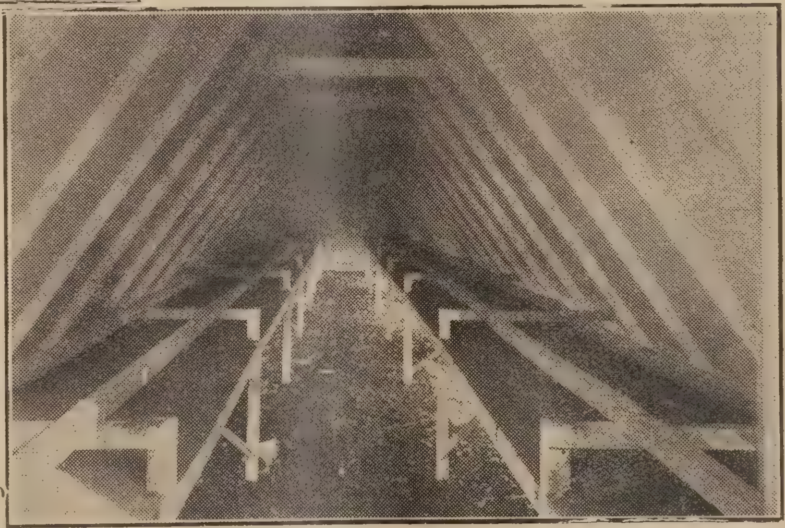

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These birds are all from my well-kn "Bred-to-Lay" strains, with upwards 10 years' consistent good breeding beh them. Strong, vigorous, and in per health. Carriage paid and on approval—

Major Haden,
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EG

Wednesday, September 23rd, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, SEPTEMBER 23rd, 1925.

Editorial.

THE MOULT AND EGG PRODUCTION.

We have been reading a very wonderful book, to wich we hope to refer later—"Experiments in Gnetics," by Major C. C. Hurst (Cambridge Uiversity Press). Major Hurst, as readers are aare, has done magnificent work, which has been ialuable to poultry-keepers, more especially to t pedigree breeder; it would be difficult to find ayone who has been so helpful in this direction. W suggest to some of our readers, who are in-tested in the problem of breeding for egg pro-dction, that they would find it far more avantageous to study "The Genetics of Egg Poduction in White Leghorns and White Wyan-dtes" than to waste their time in puzzling over t question of line or in-breeding, which, we vnture to say, does not affect the main problem—i., that of producing the heavy layer. The point, hwever, which we wish to discuss at the moment is that which gives the title to this article. It is n new subject, much has been written upon it; o knowledge is vague, but it is full of interest ad importance, and was suggested by the follow-i extract from Major Hurst's book:—

> "On the other hand, it must be admitted that precise data of the relationship between moulting and egg production are lacking. It is not at all clear, e.g., whether egg production ceases because of the moult, or whether the moult takes place at the cessation of egg production."

t is a pretty problem. If our readers will assist u by discussing it in the correspondence columns, ach valuable knowledge may be gained. What des happen? There is an old and true saying, "What grows eggs will grow feathers." It will o well to keep that in mind.

We are told that the feather, instead of being, a is generally believed, an independent unit, is in rlity one feather of continuous growth, beginning wh the down of the chick, which is the first ption of it. When a bird moults it does not "**shed**" the feather and grow a new one. What ally happens is, that the feather "breaks off," ad a further portion appears. From which we ny take it that the feather is continuously growing, and the rate of growth determines the date of the moult, its rapidity, and completeness. This suggests that the assertion that the new feather **pushes** out the old is a mistaken one, and that "shed" is a misnomer.

The next question that arises is as to the cause or causes which contribute to the great difference in the dates on which individual birds moult and the manner of the moult.

We must accept Major Hurst's statement that precise data as to relationship between the moult and egg production is lacking; but what little knowledge we possess will enable us to make some useful deductions.

Let us consider the following:—

(A) The high producer is shorter, tighter, and harder in feather, moults later, more slowly than the poor producer.

(B) The poor producer has greater length of feather, greater wealth of it, it is softer, she moults earlier, more rapidly, and more completely.

(C) The high producer feathers more rapidly as a chick than the low producer.

(D) Hens moult later in the year than pullets.

(E) Early hatched pullets which produce eggs before October moult in the great majority of cases.

(F) A January hatched pullet which does not lay before October will not moult.

(G) An April pullet, of the same breed and strain, and kept under exactly the same conditions, will moult if she lays before October.

Individual cases will, of course, occur to which these remarks will not apply. We know, for example, that ALL early hatched pullets which produce before October do not moult. All hens do not moult later than pullets. We are not, however, dealing will individuals, but with the flock. To the above should be added:—

(1) A spell of hot weather will often cause an early moult.

(2) Birds suffering from disease or sickness will moult.

(3) Fright, or sudden and drastic changes in feeding, will often cause a moult.

Dealing with (A) and (B) first. The conclusion that we may arrive at is, that the activity of the ovary, resulting in the greater production of eggs, is the deciding factor in the case of (A) that food which would nourish the feather and ensure its more rapid growth, and consequently a greater wealth of feather is diverted to meet the demands of egg production. That, as a consequence of the retarded growth of the feather, we get a later moult; in the autumn, when egg production slows up, the growth of the feather becomes more rapid and the bird moults.

In the case of (B), we may assume that, owing to a slower rate of production, the growth of feather is always more rapid. As we have pointed out, the feather is always longer with the poor producer, and when, as usually happens, egg production with her slows down at midsummer, the rate of growth of feather is much more rapid, and so she moults.

If we could finish here, we might fairly answer Major Hurst's question by saying that egg production does not cease **because** of the moult, but that the moult takes place at the cessation of egg production. The other points make the problem a little more complex.

(C) This for the time we are unable to explain; it is perhaps a question of constitution, but, even so, until an explanation can be found it does not assist us, but is merely a statement of fact.

(D) Hens on the average lay later into the autumn than the average pullet, which would appear to confirm the deductions made as to (A) and (B).

(E) The pullet is developing and producing at the same time. The demand for development results in the cessation of egg production; with the cessation of egg production there is again more rapid growth of feather, with the result that we get the partial moult.

(F) It is an interesting fact that the date of hatching does not seem to influence the date of the moult, except as in the case of (E), when it results in production at an earlier age. The date of hatching has decidedly some bearing on the age at which a pullet will produce her first egg, but it does not appear to influence the time at which the bird will moult. Why, then, in the case of the early-hatched pullet does the one **lay** and **moult,** and the other **not** lay and **not** moult? We have tried to explain in the case of the first, and now as to the second. We can assume that bodily development is not checked, as in the case of (E), and that while this is proceeding the rate of growth of feather is retarded, consequently the pullet does not moult; when she begins to lay the growth of feather is retarded again.

(G) Is very similar to (E). Egg production starts and development ceases, or partially so, when production ceases; there is no increase in the rate of development, consequently there is a more rapid growth of feather and moult.

(1) Heat probably would result in a more rapid growth of feather. We have evidence that it does so.

(Continued at Foot of Next Column).

The Chinchilla Rabbit for Fur.

By H. J. GARDNER.

PELTING.

Now that the breeding season for the Chinchill Rabbit is nearly over, many who started rearing i the early part of the year will be getting ready t pelt the surplus bucks and does before long.

Beginners are often at a loss to know when th skin is ready. The rabbit should be gone ove very carefully. Blow back the fur all over an look for any new fur growing or blue marks o the skin. If these are found the rabbit is no ready, but if you can see the white skin under th fur, the rabbit is then in full coat and ready t kill.

The best pelt is the winter coat fully moulte out with good definition, texture and length.

The best way to kill a rabbit is to give it a smar blow with your hand, or with a stick behind th ears. Sometimes the nose starts bleeding. I this happens be very careful not to get any bloo on the skin. Tie the head up in a paper bag o sheet of paper. As soon as the rabbit has stoppe quivering and is quite dead commence to skin i (some advocate hanging it up for half an hour, bu I find that the skin comes off better if done a once). To proceed with the pelting:—Make hole in the middle of the stomach, taking care n to pierce the inner skin, insert the fingers and wor the pelt loose, then take a sharp knife and slit dow to the vent. Follow the white fur down first on leg, turning back the fur, then the other leg th same. Cut away at the first leg joint, now loose the skin of back, slip in the knife and cut awa to the tail (leave this on the carcase). Turn th skin off up to the shoulders, work these free an cut round leg joint. Continue to pull skin off righ up to the neck and base of ears. Run the knif round the skin, it is then free from the carcase Hold up the skin and run knife down from the firs cut to the neck. The skin is now ready for pinnin out.

---

(2) Cessation of laying almost invariably accom panies sickness or disease; even after a sligh cold birds will moult.

(3) Fright generally results in a big drop in th egg yield, and is often followed by the moul Drastic or sudden changes in the diet often resu in poor assimilation of food for the time being, the birds consume less, resulting in decreased eg production, or in the cessation of laying, and th bird moults.

Other points may be urged, but we have sai enough for the present. Our hope now is that ou readers will start a discussion on the subject, an throw further light upon it.

Secure a board, 2 ft. by 2 ft., place the skin on fur side down, and secure it with tin tacks, or, etter still, drawing pins. Get the centre of the in at head and tail and pin these down. Be sure ot to pin it crooked. Work out first one side and en the other. Care must be taken not to over- retch and equal care not to leave wrinkles. emove all fat when pinned out, but do not scrape use alum on the skin. Just air-dry, taking care keep off flies. A piece of tissue paper a little nger than the skin pinned over is all that is cessary. Do not dry by the fire, but stand in a aught, and in about four days it will be ready remove from the board. Store until ready to nd away, packing skin to skin and fur to fur.

Do not be in a hurry to pelt your rabbits. Make ite sure that they are ready, as it will mean veral shillings difference if the rabbit is not oulted out properly.

There are quite a number of people ready to buy inchilla skins, and I think that the coming ason will be a good one for those who have good ins for sale.

In the beginning of this article I said that the eeding season was nearly over, but next month any breeders will be mating up their this year's ung does, so the breeder who is enlarging really ever stops breeding.

During the last month I have carried out several sts in feeding. I chose for my tests five Chin- illas and four Angoras. These rabbits were ken away from their mother, the Chinchillas at e weeks old and the Angoras at two months old. ach one fed as follows :—

1st Angora—Chinchilla—Hay morning, green ght.

2nd Angora—Chinchilla—Crushed oats morning, y and green night.

3rd Chinchilla—Dry bran morning, hay and een night.

3rd Angora—Chinchilla—3 parts bran, 3 parts arps, 1 part Sussex ground oats morning, hay d green night.

4th Angora, 5th Chinchilla—3 parts bran, 3 rts sharps, 1 dried-milk morning, hay and green ght.

All the youngsters are doing well, and have had other food but the above since they left their other, a month ago. Each are weighed weekly, d at present there is very little difference in their eights.

I intend keeping on with the test until the Chin- illas are ready for pelting.

The Angoras are groomed and all wool weighed.

They are in outside hutches, and the Angoras d one Chinchilla are on wire netting bottoms ith no straw or other bedding. Hay is fed from cks.

The green food fed has been clover until a few ys ago, when I changed it to kale.

The best clover hay has been used throughout e test.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

THE PROPOSED EXPERIMENTAL FARM.

I am sure that members will be greatly interested in the announcement that the Council has definitely decided to start a small Experimental Farm —if possible at Rudgwick. As stated in last week's issue, a committee has been appointed with power to act, and the sum of £500 has been voted. The Council has no very ambitious ideas, it is felt that certain practical experiments which should be of great value can be carried out. £500 is a modest sum for such a purpose, but the wisdom of not spending a larger amount at present will be appreciated. It is hoped that the experiments will be to a great extent self-supporting, but even if they are not entirely so, the Members will, I venture to think, approve the action of the Council. Of the nature of the experiments I can say nothing here, that is for the committee to decide, but I am hoping to induce it to test a new food, which has the advantage of being cheap, and as far as my present knowledge goes distinctly useful. More will be said of this later. Whether success will attend the efforts to secure suitable land at Rudgwick has yet to be discovered. I have not yet found time to make enquiries, but hope to do so before these lines appear in print.

May I speak here of the great debt of gratitude, which, not only members of the S.P.B.A., but all those engaged in the industry, owe to Miss Malcolm and Mrs. Pember for the work they have carried out on behalf of the Association on their farm at Wellingham. The value of such work depends entirely on its being thoroughly and conscientiously done, with that strict attention to detail so essential to experimental work if it is to be of any value. It has been very arduous work, needing the keenest enthusiasm and interest to enable one to carry it through. Thanks to the very capable manner in which the experiments have been conducted, they have been of great practical and educational value to our members; if we add to this the fact that Miss Malcolm and Mrs. Pember have allowed the Association the free use of the land, and the only recompense they have received has been the interest they have found in the work, then I am confident you will all agree that we have much reason to be grateful to them.

WONDERFUL FERTILITY.

Mr. S. Mason sends me the following letter :—
" I wonder if you have had an experience such as I have just had. I have a brother who had a

Light Sussex cockerel he did not want, so he sent it to me. I did not know what to do with him, so I put him in a run where I have about 120 trap-nested 1924 pullets running. I intended mating him with some Rhode Island Reds for chickens for the Xmas market. My wife and I were talking it over, and I said, let us try a sitting with the pen he is with now. We picked 39 Rhode Island Red eggs and put under three hens. The result was very astonishing to us; we had five clears, 30 chicks, and four dead-in-shell. We have since had two lots of 27 each. A lady customer had a sitting of 13 eggs from which she had 11 chicks. I think this is wonderful with a bird running with 120 hens. We have not lost a chicken, and they are a lovely lot."

Mr. Mason is right, this is very wonderful. I do not remember having heard of such a case. On the continent they use much larger matings than we do. My one experience of a large mating was through an accident. Three cockerels were mated to 40 Red hens, one tore a lobe, and the hens nearly killed him, the other two fought and one only just escaped the fate of the first. The consequence was that the other bird was left with the 40 hens, but the fertility and hatchability of the eggs was excellent. Still, this is a trifle compared with Mr. Mason's results. It is, of course, unlikely that all the hens in his case were laying; possibly at this season a good many were not, and that would make a considerable difference.

A DIFFICULT CASE.

I have just had the following problem set me :—A reader orders a certain number of pullets from a breeder, in due course these arrive and are paid for. The purchaser then decides to have them blood-tested, and a certain percentage of them re-act. This fact is at once communicated to the breeder, who declines responsibility, and the buyer refers the matter to me. I am not going to express any opinion here, it is just put forward as a little case for you to ponder over, and if you are breeders you will ponder a good deal. With the advance of the industry we are bound to be confronted with problems which we did not anticipate. Certainly we did not expect any of this nature, and this makes one think very seriously.

FOOD PURCHASE SYSTEM.

London prices for mashes are the same as last week, but in other districts there has been a drop in the price, and quotations will be sent on receipt of a postcard, addressed to this office.

The prices of mashes for this week are :—

London (per ton).—Layers' Mash, £11 10s.; Growers' Mash, £11 10s.; Breeders' Mash, £12 5s.; Chick Mash, £12 10s.

The minimum quantity that can be supplied is 5 cwt.

Will readers please note that we are only giving London prices; that there are slight fluctuations in different areas.

I quote the following from a letter received thi week :—

> " Your food scheme has made all the difference to just dragging on, and making a fai profit, my monthly costs for food being 15 pe cent. less and egg production 15 per cent higher."

The writer asks if samples were sent to me b some of the members from time to time it woul be advantageous; certainly it would, there woul be less risk of mistakes.

Numbers of members have written expressin their appreciation of the scheme.

SEX LINKAGE.

The writer of the letter, Sex-Linked Inheritance which appeared in issue of 9th inst, asks me t " correct a slight error." It reads, " With regar to the laying qualities, I am not quite satisfied,' whereas it should read, " I AM QUITE SATISFIED." I can only express my regret for th mistake, and hasten to make amends. So far fron being a slight error, it was a very material one.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that the must necessarily be scientists, pedigree breeders, or farmers on large scale to render themselves eligible for membership of th S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out t assist all grades of poultry-keepers, from the proprietor of th 10,000-hen farm to the intensivist with his dozen or so birds; al are entitled to equal benefits. The Five Shilling subscriptio brings with it many advantages, namely: Free Advice by Post a Copy of the Annual Register, the Benefits of the Discoun System, and many other advantages too numerous to mentio here. You should write for full particulars to the Secretary TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex

The Financial Year began on 1st September.

CORRESPONDENCE.

CO-OPERATIVE POULTRY PRODUCTS, LTD.

To the Editor of " Eggs."

Dear Sir,—Several letters have appeared i " Eggs " recently abusing the methods and price given by above Society, but all signed by a nom-de-plume. As everyone must realise, the middlemen will wish to break the Society (as it will detract from their profits), and it is so easy for then to write under false names, etc., to the Pres similar letters to the ones published in " Eggs.' I trust nobody will take any notice of such letters unless signed by the author's **own** name. I an surely a very satisfied member, and no othe motive prompts this; but to give a new show fair chance.

JAMES HARGREAVES.

There has not been, as far as we are aware any **abuse** of the Society in these columns. Mr Hargreaves should recollect that no letters ar published in these columns under a nom-de-plum or otherwise, unless we are satisfied as to th bona-fides of the writer.—(Editor).

Answers to Queries.

By the EDITOR.

DUCKS.

ev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

odies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

eaders are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

eplies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

LL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

J. M. (Stockport) has a dreary tale to tell. The egg verage of 62 Wyandotte pullets for the 11 months nding August 31st, is just under 102 eggs per bird, nd "J M." doesn't think it pays, so he sends me articulars of his feeding, tells me that the birds come om a good laying strain, asks if I think he would have one better on dry mash, and for any help I can give im. I will answer his question first. He would not ave done better on dry mash; his feeding is correct, s far as it goes, although I have a suspicion that nderfeeding is in some measure a cause of the ouble. The birds have had enough for maintenance nd a bit over, but not enough for heavy egg production. There would be an improvement, I am sure, if ne $2\frac{1}{2}$ozs. mash, weighed before scalding, was given—hat extra half-ounce would make a wonderful difference. Apart from this, however, I am inclined to hink there has been some overcrowding, although J. M." does not give me any details; his hens are clined to hang in the moult. More generous feeding nd the addition of four per cent. linseed meal to the ash will help them, but nothing will be of any avail there is overcrowding.

G. R. S. (Belper) wishes to keep 40 pullets for egg oduction. He has constructed a house 10 x 10, and as a nice piece of grass 25 yards by 12, and he wants know what I think of it, and how he can best make se of it. Advice as to feeding is also required, and he best breed for his purpose. He will be overcrowdg if he attempts to keep 40 pullets under such cirmstances; 30 should be the maximum number. As the grass plot, it is too small to divide, and the best plan will be to allow the birds the use of it for only one hour a day. By this means they will get greater value from it than if they occupy it for a longer time. The best time to let them out would be for an hour before the last feed. The best breed for his purpose would be the White or Black Leghorn; Buff Rocks or Wyandottes would also do well under such conditions. As a mash, wet or dry, the following will be best:—Alfalfa Meal, Bran, Sussex Ground Oats, Maize Meal and Meat and Bone Meal, 1lb. each; Middlings, 4lbs. It is important that the bran and middlings should be of good quality. As grain feed three parts kibbled maize and one wheat. A small scratch feed to be given in the litter, as soon as the birds are off the perch; a good 2ozs. of grain per bird as the last feed.

Troubled (Swansea) has early March Reds, which began laying on the first of this month, and many of the eggs have been shell-less, and a good number double yolked. They have dry mash always before them, supplemented by one ounce of wet mash at mid-day; he has lost a pullet from prolapsus, and some of them are weak on their legs. Examination of the dietary reveals too high a percentage of fish meal, but this in itself does not wholly account for the trouble, which is largely due to the fact that the birds have been bred from highly-fecund parents. When such pullets come into lay, the ovary is abnormally active, and they want feeding with care and observation. "Troubled" should at once discontinue the wet mash, reduce the fish meal by one-half, and replace the maize in the grain feed with good plump white oats. The pullets which are weak on the legs should be placed in a hamper on soft hay, given a mild dose of Epsom salts; a meal of boiled rice once a day, and a few oats will be the best method of feeding. The rations advised is only a temporary measure; when the birds have been laying for a little longer they can return to the old formula, with the reduced amount of fish meal.

New Reader (Worcester) hatched White Leghorn pullets in April. On the whole they have done well, but some show no signs of reddening up, but have pale faces, two look very yellow, and all are lanky and have small bodies. He has also a tail-less bird, and wants to know if this is worth keeping, and how to treat the others. His best plan would be not to treat any of them, they will never be profitable; such birds are common in most flocks, and they never are and never will be any good. If this was more generally recognised there would be less complaints of unprofitable poultry. "New Reader," if he wishes to do so, can add two teaspoonfuls of cod liver oil to each pound of mash, give an iron tonic, one feed of bread and milk a day, and a good supply of fresh green food; but, if he is wise, he will kill the lot. The tail-less pullet is worth keeping in so far as she will produce eggs, but if bred from she will produce her kind. (2) No, barley will not cause liver disease unless fed in excess. As my correspondent can buy it very cheaply, he could use it in place of maize or wheat.

Linkage (East Kent) has Light Sussex, and wishes to breed sex-linked chicks next season. He asks which I think better to use, a Rhode Island or Red Sussex male? I can't see what there is to be gained by the cross anyway, but that is not my business. He will get better egg production if he uses a Rhode Island cockerel, a more uniform lot of pullets, and a better table bird, if he uses the Red Sussex. Sample of fish meal at 19s. is not suitable for poultry feeding; it is very smelly, and contains a great excess of oil. If "Linkage" uses it he must expect trouble; the difference of 5s. in price between that and sample B. is the difference between a good sample and a worthless one. The ground oats are good value for the money. I quite agree that if such a good sample as this is obtainable, it is not worth paying more for a sample of Sussex ground.

E. D. (Somerset) thinks his Wyandottes lack stamina, and he has made up his mind to get a good exhibition male to mate to them next season. He now wants my opinion. As he has made up his mind, I don't thing my opinion matters very much, but I will give it as it is asked. In my view it is a mistake; if stamina is to be improved, it is a matter of careful selection and mating. "E. D." should remember that he will not only breed in stamina, but certain other characters which are not desirable where heavy egg production is the object, characters which will take a great deal longer to eliminate than he at present realises. He will be far wiser to carefully select his breeding hens, and mate them to a vigorous male of approved pedigree. By such means is stamina preserved, and not by out-crossing, which is, of course, the more simple but less profitable way of proceeding. In answer to his second question, the full account of this year's Wellingham Experiments will be published in the Annual Register, including the feeding experiment.

B. L. W. (Braunton). I cannot say definitely, and it would have been wiser had you sent the bird for post-mortem examination, but the liver seems to have been tubercular, I cannot say whether the three pullets from the same hatch will be fit for breeding next season; it does not necessarily follow that they will be diseased. If they show any symptoms it would be wise to kill them.

C. E. R. (Wakefield). Now is the time to join the S.P.B.A. Had you sent your name and address, we should have sent you forms. The fact that you do not trap-nest, does not debar you from membership; the subscription is a minimum one of five shillings. There is no fee for postal advice to members. You would be entitled to a copy of the "Year Book" free, if you join now. If you will send me a card I will send you all particulars. The meat and bone meal at 20s. per cwt. is dear, at least 40 per cent. of it is bone. The ground oats are steel ground, and are excellent value at the money, quite equal to S.G.O. The biscuit meal at 30s. is not an economic proposition. The fish meal at 23s. 6d. is good value. I should return the Ancona cockerel; he is far too small. A
you are short of green food it would be wise to us
alfalfa meal in the mash during the winter months.

H. B. (Fife). I do not think any sex-linked cros
or any other cross, would excel the Rhode Island Re
cr Buff Rock in hardiness; either are very suitable f
the conditions you describe, and they are both goo
winter layers of good-sized eggs. With regard to th
incubator it would certainly be wise to disinfect this
the best means would be by fumigation. It is quit
true you have no evidence that the mortality was du
to B.W D., but, as you say you do not know to wh
it was due, it would be wise to take precautions. (
I do not know of any breeders of Utility Whi
Plymouth Rocks in this country.

POST-MORTEMS.

S. E. G. The post-mortem examination of th
two pullets showed that the haemorrhage in th
case of No. 496 came from the rectum, and wa
due, in my opinion, to the large amount of u
digested, fibre found in the lower part of the i
testines. These was also much harsh and cruc
fibre in the gizzard mixed with very fine but shar
sand. In the case of No. 433, the external appea
ances and the odour were very suggestive of ve
gleet, but internally there were none of the lesion
associated with that disease, and I should rath
suspect that the external conditions were cause
by the irritation of the bowel discharges couple
with the attentions of other birds who would
attracted by the blood, etc. Vent gleet is a co
tagious disease, passed on by coitus, and if th
is an entirely pullet flock with no cockerels ru
ning with them, vent gleet proper is not at a
likely to be the trouble. In my opinion, the troub
is with the quality of the foodstuffs, in containin
so much crude fibre, and that as soon as this
corrected cases will cease to occur.

R. W. The post-mortem findings in the case
the cockerel were those of intense irritant poiso
ing, very suggestive of arsenic combined with a
alkali, such as is usual in the case of sheep di
and weed killers.

I. Q. T. The post-mortem findings in the ca
of the W.W. hen (1924) were those of asthenia,
disease due to bacterial infection and characteris
by rapid and extreme emaciation and a muc
enteritis of the small intestines, especially the fi
part of them, viz., the duodenum. Birds "goin
light" should be separated from the flock if it
desired to treat them, and be given a purgati
dose of castor oil, followed by internal disinfecti
through the medium of the drinking water. Zi
sulpho-carbolate, 15 grains in each gallon, is we
reported upon for this purpose, or a like quanti
of sodium hypo-sulphite for each bird may be mix
in the mash daily. The droppings should

ıed, and the house thoroughly disinfected at t intervals, as the excreta are the chief means ransmission of the disease.

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ifton Hampden. The post-mortem examina- of the Bresse hen showed that the cause was aemia, which is a disease of the blood and d-forming organs. There is no specific treat- t, but recovery in mild cases has followed the y administration of five grains of potassium le, together with tonics, such as iron and nux ica, coupled with good nursing and generous ing. The infectivity of the disease is slight, birds showing the slightest symptoms should solated, the litter and droppings burned, and house thoroughly disinfected.

E. B. The White Leghorn pullet was affected fowl typhoid (no connection with the typhoid of man), and you will, indeed, be fortunate if ırther cases occur among her incontacts. This should be kept in isolation, the floors of the es, dropping boards, nest boxes, perches, etc., thoroughly cleaned and disinfected with ıg fluid disinfectants at short intervals. The , etc., should be burned, the droppings being chief media of spread. As a preventive, lve 15 grains of sulpho-carbolate of zinc in gallon of their drinking water, but, although to some extent is also curative, it is the best y, unless a large number of birds are affected, estroy and cremate any bird that appears to ling.

N. D. The post-mortem examination of the en showed that the cause was the enormous er of round worms with which the intestines infested. The parasites had not only caused us digestive disturbances, but considerable ımation, and had in some parts completely ed the gut. To treat 100 birds take a pound ag tobacco, or, if obtainable, a like quantity bacco stems, and steep in enough water to for two hours. The liquid and the tobacco hen mixed with a small mash, which should d to the birds after a twelve hours' fast; in fternoon give a mash containing 11 ounces som salts (per 100 birds). The floors of the es should be well disinfected, and the drop- and worms collected and burned. The runs d be cleaned, and the soil dressed with salt soot, the birds being kept off them until the has taken the salt into the ground. Repeat eatment after an interval of two weeks, feed- enerously in the interim.

ANSWERS TO QUERIES—Continued.

H. (Carr Hall) asks for standards for Speckled ight Sussex. I am afraid I cannot make a prac- f giving standards in these columns, as they y too much space, and are not of sufficient l interest. However, we will make an exception s case.

General Characteristics. (Breed):—COCK: Skull, medium size; beak, short, strong and well curved; eyes, full and bright; comb, single, medium size, upright, evenly serrated, fitting closely; Face, smooth ear, lobes, and wattles medium size. Neck of medium length with fairly full hackle. Body, broad, deep and long, square breast, and carried well forward with long and deep breast-bone; wide shoulders; broad and flat back; wings carried closely; tail of moderate size, carried at an angle of 45 degrees. Legs short and rather wide apart, the thighs stout and the shanks strong and free from feathers. Toes (four) straight, long and well spread. Carriage, graceful and erect; plumage, close; weight 9lbs.

THE HEN:—The general characteristics are similar to those of the cock, allowing for the natural sexual differences. Weight, 7lbs. COLOUR: Beak, white or horn; eyes, red in Speckled, orange in Light; comb, face, lobes, and wattles, red; legs and feet white, flesh and skin white. Plumage (Light), pure white, with black striped neck hackle, black in flights and black tail. The black centre of each feather of the neck hackle to be entirely surrounded by a white margin, and finishing in a decided white point, not a black tip or outer edging. Plumage, Speckled (Cock): Hackles rich dark mahogany striped with black and tipped with white. Wing bow, speckled. primaries white, brown, and black. Tail sickles black with white tips. Remainder rich dark mahogany, free from "pepper." Each feather tipped with a small white spot, a narrow glosssy black bar dividing the white from the remainder of the feather, the three colours to show distinctly to give the desired speckled effect, and neither colour to run into the other. Undercolour, slate and red with a minimum of white. Plumage of hen: FLIGHTS, black, brown and white. Tail black and brown with white tip. Hackle and body, rich dark mahogany colour, each feather speckled with a small white tip and glossy black bar, as mentioned in the cock. Scale of Points: Type 25, size, 20, colour 20, legs and feet 15, head 10, condition 10—100. Serious defects: Rose combs, feather on shanks, other than four toes; any deformity.

E. E. (Seamer). You certainly cannot feed such a mash and expect to make a profit. It is utterly impossible under such conditions as you describe. Dried yeast is hardly necessary in the mash, and it would be well to replace it with the same quantity of extracted soya bean meal, which would very much cheapen your mash. If you are minded to give them a small wet feed, I should do this at mid-day, merely taking the mash as it stands, and moistening about an ounce of it per bird with warm water, and feeding at once. The dry mash would, of course, be in front of them all day, with a good feed of grain half-an-hour before they perched. Do not make the change too suddenly, or the results may be disappointing. Dried yeast would be used just as it is for dry mash, and simply scalded with the other ingredients for the wet, but it should not be allowed to stand after scalding, as there may be fermentation. No. 2 is the best of the two illustrations of hoppers you send. The mash would not need altering for the summer, except, as there would be abundance of natural green food, you could replace the alfalfa with middlings.

S. M. A. (Warwickshire) writes a funny letter. He says he would esteem it a favour if I would give him my opinion *re* feeding. He writes:—"I have for about two years been keeping poultry on a small scale. At the end of last year I was £8 in debt with them, but I am pleased to say that, after reading your valuable paper, 'Eggs,' I soon discovered the reason (it was the feeding). So I started feeding the mash that you gave in a supplement in 'Eggs,' October, 1924—i.e., 4lbs. middlings, 1lb. bran, 1lb. fish meal, 1lb. clover meal, 1lb. S.G.O., 1lb. maize meal. Grain, 2lbs. kibbled maize, 1lb clipped oats, 1lb. wheat. I might say my birds have laid very well indeed since feeding on your lines; in fact, I am £15 in pocket now. The above mash, I believe, was a breeders' mash. Now, Sir, I have another of your mashes, which is as follows:—it is a layers' mash: 4lbs. middlings, 2lbs. bran, 2lbs. maize meal, 1lb. fish meal or meat and bone meal. A gentleman from whom I bought some pullets sent me a layers' mash as follows:—3lbs. middlings, 2lbs. bran, 2lbs. maize meal, 2lbs. ground oats, 1lb. fish meal. Now, Sir, all three mashes are about the same price, only a matter of a few pence per cwt. Which of the three mashes would you advise me to use for layers' to get the best egg output? I shall want to breed from these birds in 1927, and what grain mixture would you use with either of two latter mashes? I might say that I followed your advice and put another part maize meal in the mash about mid-June. Not only are the birds laying longer, but the eggs seem to have increased in size."—The mash given in the supplement was a breeders' mash. With regard to the other two formulas, there could not be any great difference in the results, therefore it would be wise to choose the cheaper. In the one case the grain mixture should consist of two parts maize, two wheat, and one oats; in the second three parts maize and one wheat. They are neither of them forcing mashes. One bran could be replaced in either of the two mashes if there is a shortage of green food.

Correspondence—Continued

SEX-LINKAGE.

Dear Mr. Newman,—In the current number of "Eggs" (9th September) we have the welcome views of Mr. Tyzack on this all-important matter—with your kind permission I will give other views, appertaining to the rearing of Leghorns.

Let us take the man who wants to produce about 1,250 pullets every spring. Those with experience in these matters will not argue with me when I say that this means putting something over 5,000 eggs into the incubators. Say this number is divided into three lots, which means brooder accommodation for something over 1,250 chicks. Think of the enormous saving in capital expenditure, and current expenditure and labour if half these chicks—the cockerels, of course—could be disposed of at once and only the pullets reared. In fact, provided the incubator capacity was sufficient and the brooder house accommodation already provided for the larger quantity, two lots of chicks could replace the previous three lots, which would be much better for the chicks, and the houses they are reared in and the land they are reared on. It is no mean task rearing 1,250 pullets; one MIGHT get 1,500 females from over 5,000 eggs, but if 1,250 PULLETS were the outcome, that one was not ashamed of and that would show up well through the trapnests, then one could rest somewhat satisfied.

For a commercial egg farmer to produce a good sex-linked chick that will in turn produce a useful pullet, he must have two kinds of really good pure-bred stock. One kind for his cockerels and anoth for his breeding hens. On a farm of 2,500 bir he would need, say, 300 breeding hens and breeding cockerels; this would mean keepi about 600 pure-bred hens to choose from a another pure-bred stock of about 200 to choc his first-class cockerels from. This accounts about 800 of his 2,500 farm, leaving 1,700 to supplied from the sex-linked cross. (Of cour so far as rearing is concerned, these figures halved where half the stock is replaced every yea From a little manipulation of these figures I thi it will be seen what a saving in rearing alone c be obtained from a good sex-linked chick.

With regard to the Leghorn cockerels, I ha not heard of many, and I certainly do not p sonally know a poultry farmer who makes a pro from Leghorn cockerels. The production of 1,2 good pullets means the disposal of at least 1,2 cockerels; put the loss at 3d., and it means £1 and I really think mine is greater than this.

Possibly some who read this will wonder wh cross I am favouring, so I will say right away is not some diabolical cross of a light and a hea that produce birds of all colours of the rainbo and make one ashamed to take "people w matter" around the farm, but a high-fecu Cuckoo Leghorn (rather difficult to obtain at t moment, I will admit, but the demand will produ the right bird) crossed by a pure Black Legho (no difficulty in fecundity here!).

Were poultry to me a hobby and not a busine from which I have to make a living I would sco the cross—for I really love the nobility of pedig pures—but we have got to cut every conceiva loss and make a profit or go under, so if a respe able sex-linked cross is going to help us to do t (together with our pures, mark you, to bre from) we must leave the sentiment and accept t commercial proposition.

Those who rear Leghorns in large numbers w agree with me in the majority, I know, wher emphatically state that the Leghorn cockerel is cussed nuisance.

My, what a length I have gone to again! I should be glad of some support from other co mercial farmers who KNOW.

Yours very sincerely,
W. R. MORRIS HAMMOND

THE 1926 S.P.B.A. REGISTER.

We are now busily preparing the 1926 Register, and hop make it at least as good as those that have preceded it. have already received promises of some articles from the of experts which will prove most useful and interesting to members. We shall be glad to consider any articles of pe nent interest from our members, those dealing with pers experiment will be most acceptable. The forms for the R tration of Pens are now ready, and will be sent on applica We would ask our members who wish to register their pen read most carefully the full instructions sent out with the fo and to note that only pens which exactly conform to the can be accepted. If this is carried out, much time and an ance will be saved. Each year the Editor has to send ba number of forms which are incorrectly filled in, or which do comply with the rules, and this causes delay and oftent disappointment. The forms when filled in should be sent to Editor as soon as possible, and IN NO CASE can Registra Forms be accepted LATER THAN OCTOBER 16th. All a cations for Registration Forms should be sent to Rev. Mudie-Draper, 25, The Chase, Clapham Common, S.W. 4.

THE SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

A WARNING.

I have received a letter and a sample of mash fom a member in the Midlands, Warwickshire to exact, and he informs me that it is being largely s'd as Tom Newman mash. In the sample subtted there was no trace of Sussex ground oats, ize meal, or any animal protein, and ingredients re of the poorest quality. As previously stated, cannot prevent anyone from using my name in nnection with the formulas given in "Eggs," t I would suggest that it would be advisable anyone buying mashes advertised as from my mula to deal only with firms of repute, or they ould send samples to me.

IMPORTANT NOTICE.

The Annual General Meeting will be held on dnesday, October 21st, at 4.30 in the afternoon cisely.

ELECTION OF OFFICIALS.—Three members the Council retire annually and are eligible for election. The retiring members are:—Miss iddison, Dane Hill, Sussex; Mr. P. Hedworth ulkes, Pond Cottage, Virginia Water; Mr. J. H. wden, Heydown, Heathfield, Sussex. All are ering themselves for re-election.

OMINATIONS FOR THE COUNCIL should be eived by the Secretary not later than Wedsday, September 30th. Voting papers will pear in the issue of "EGGS," dated October , and should be returned to the Secretary not er than Wednesday, October 14th.

ESOLUTIONS to be submitted to the General eting must be received by the Secretary not er than Wednesday, September 30th.

TOM NEWMAN, Secretary,

ollowing the business meeting, a dinner, at ich Mrs. Hunter, President of the S.P.B.A., l preside, will be held in the King's Hall, of the lborn Restaurant. Reception at 6.30. Dinner 7 p.m. Tickets will be 10/6 each, exclusive of ies, but including all tips to waiters, head iter, and wine waiter.

t is earnestly requested that early application made for tickets, as a heavy demand is excted, and accommodation is limited to about seats. Tickets will be posted on October h. It may be impossible to comply with plications received after that date. Until it is nd how many members wish to attend the ner, it will not be possible to arrange for them bring guests. Application for tickets to be de to

Mr. TOM NEWMAN, Rudgwick, Sussex.

velopes to be marked "Dinner."

heques or postal orders must accompany plications for tickets. All applications will be lt with strictly in rotation.

orning dress will be worn,

APPLICANTS FOR MEMBERSHIP.

Brooksbank, Hartley, Brown Hill Farm, Cullingworth, Nr. Bradford.
Hudson, Alec, Town End Place, Glusburn, Nr. Keighley.
Baird, A., The Lodge, Gowanbank, Avonbridge, Stirlingshire.
Smith, H. R., Frimley Nurseries, Frimley Green, Surrey.
Roberts, W., Duncarnock Farm, Newton Mearns, Renfrewshire.
Knowles, C. W., Lord Rayleighs P.F., Little Baddon, Chelmsford.
Duff, R. T. H., Glenbrook, Balerno, Midlothian.
Floyd, W. J., Dunkery P.F., Hillcrest Rd., North Weston, Nr. Portishead.
Thatcher, R. J. O., The Bungalow P.F., Brisbane, Largs, Ayrshire.
Davis, T. Laurentien View, Ontario, Canada.
Tomlinson, C., 1, Chorlton St., Blackburn.
Tottenham, Miss L., Ballycurry, Carpenters Hill, Beoley, Worcs.
Hurl, S. P., Braemar Poultry Farm, Garstang, Lancs.
Bayliss, H., "Oaklands," Breach Oak Lane, Corley, Nr. Coventry.
Howarth, C. Hartley-, Parkers Farm, Hutton, Nr. Preston, Lancs.
Littlewood, S., 3, Duke St., Norristhorpe, Liversedge, Yorks.
Brownlee, W. A., Hill House, Lisbellaw, Co. Fermanagh.
Kay, J.,Hey Heads Cottage, Harwood, Nr. Bolton, Lancs.
Spenceley, J., Doudfield Farm, Marple, Cheshire.
Ward, H., 60, Woodland Rd., Leicester.
Holdway, L., Hay Grove Farm, Westwood, Bradford-on-Avon.
Glasgow, W., "Mulben," Horndon-on-the-Hill, Stanford le Hope, Essex.
Bartlett, P. R., Oaklands, East Howe, Kinson, Nr. Bournemouth.
Anderson, S. J., Acton, Poyntzpass, Co. Armagh, Ireland.
Tennant, J. (Junr.), Croftlands, Bothel, Aspatria, Cumberland.
Maledy, A. J., "The Lilacs," Avenue Rd., Brockenhurst.
Bury, T. A., Blackmoor Heath P.F., Ockham, Ripley, Surrey.
Orman, Lt. L. C. (D.S.O.), Highfield, Bowdens, Langport (Som.
Anderson, A., Green Street, Darvel, Ayrshire.
Arden, E., Mount Farm, Kinnerton, Nr. Chester.
Gilbert, Major D. P., Walldown, Whitehill, Bordon, Hants.
Hamnett, W., 13, Dewhurst Rd., Rochdale, Lancs.
Bulman, J. A., Heather Cottage, Hollow Meadows, Nr. Sheffield.
Saunders, W. O., 40, Kellerton Rd., Lewisham, London, S.E.13.
Morrice, W., Warren Bayne, Horndon-on-the-Hill, Essex.
Weir, R., Littledean, North Berwick.
Smith, Miss P. Thistleton-, Norton Hall, Fakenham, Norfolk.
Webb, Mrs. E., Oaklands, Church Rd., Hartley, Longfield, Kent.
Beaton, C. W., "Oaklands," Lealand Rd., Drayton, Hants.
Wallace, Miss A., Willow Vale, Nairn, Scotland.
Massey, B., Ribble View P.F., Warton, Kirkham.
Wilde, W., Oakdene, Chapel Haddesley, Selby.
Piercy, F. J., Perseverance P.F., Crow Lands, Romford, Essex.
Webster ,J., Bank Top P.F., Dewsbury, Yorks.
Brown, J. W., Skellyton Farm, Larkhall, Lanarkshire.
Hebditch, E. W., Cedar Grove P.F., Martock, Somerset.
Stacey, Capt. H. C., Park Farm, Beddington Lane, Croydon.
Creber, H. C., Lanjore, St. Germans, Cornwall.
White, Miss M. E., Eastcourt, Bagshot, Hungerford, Berks.
Baker, C. F. Stewart, The Firs, Woodchurch.
McCarthy, Capt. W. H., Springfield Lodge, Camberley, Surrey.
Holbecke, C., Brookvale P.F., Glenavon Rd., Millpool Hill, Nr. Birmingham.
Heppenstall, P., Hollin Hall Farm, Cross, Holmfirth, Huddersfield.
Smith, F. C., 130, Milner Rd., Selly Park, Birmingham.
Winfrey, Miss P. R., Castor House, Nr. Peterborough.
Cooper, G. G. The Bungalow, Walpole St. Peter, Wisbech.
Markland, R., Welsby P.F., Bretherton, Nr. Preston.
Facer, R., High Lee Farm, Shore, Littleborough.
Farrow, W. J. J., Retreat Cottage, Amberley Rd., Leyton, E.10.

Scientific Poultry Breeders' Association,
RUDGWICK, SUSSEX.

Dinner, 1925—Holborn Restaurant.

October 21st, 1925.

Please send me .... Dinner Tickets at 10/6.

Amount herewith £ : :

(Cheques should be made payable to
Tom Newman or Bearer.)

I desire, if possible, to sit near or be grouped with the following :—

....

Signature ....

Address ....

To the Secretary,
S.P.B.A.
....

Modern Poultry Feeding.

By **TOM NEWMAN.**

"FOOD AND HEALTH."

This small book hardly concerns the poultry-keeper as such, but Dr. Plimmer's work is so well known to readers of "Eggs" that reference to it here may not be deemed out of place. In the preface it is stated that the book is an attempt to explain concisely the principles which should guide the selection of food, and to point out which foods should be eaten and why others should be avoided.

It is a little amusing to find that the authors in referring to the frequent complaints that such words as **vitamin** and **protein** are too complicated, and that scientific people cannot express themselves in simple language, assert that the complaint should really be on the other side, and that the public and the Press do not trouble to learn a few special terms relating to food, though they pick up without effort a large number of technical terms dealing with wireless, motor cars, athletics, and dress. Well, well, the average man doesn't take much interest in food, unless he has an appetite or a pain, and perhaps that explains why he does not trouble as to the meaning of the words mentioned above. Was not Sir Oliver Lodge appealing to scientists the other day to use terms which would enable the average man to understand? Everyone has not the facilities for discovering the meaning of the terms used by scientists. However, the reader will have no cause to complain of the use of obscure terms in the book under review.

The first chapter is an exceedingly interesting one, treating of "Civilisation and the Changes it has made in our Food." Take the following extract:—

> "Cereal foods have suffered most severely since the introduction of machine-milling, about 1870. Formerly the staple cereal of the East (rice) was pounded by hand, and in this country our wheat was coarsely stone ground at the local mill, and only part of the bran removed. Wellington's soldiers were famous for their fine figures and good looks, yet the food they ate would be scorned nowadays. They received one pound of wheat per day. They ate the whole grain as it was issued, or if time allowed they pounded it up and made a coarse bread."

While one may be prepared to admit that in the main this is correct, it surely would be wise to remember that there were other conditions which should be taken into consideration. At that time the agricultural population was proportionately much larger than it is at present, and industrial conditions have probably had a far greater influence on the physique and health of the nation than
the actual food supply. One wonders whether t
agricultural labourer of those days was, on t
whole, so well fed as he is to-day. But my reade
will complain that this is a little outside the p
view of the poultry-keeper. In any case D
Flimmer's book is of extreme interest and val
and is written so lucidly and simply that one finds
real pleasure in perusing it.

Chapter II. treats of "Food: Its Purpose a
Nature." The author tells us that food has t
distinct purposes. The greater part is burned
to keep the body warm and to give it energy
movement, and never becomes part of the livi
tissues. Only a small quantity of the food ent
into the intimate structure of the body to repla
worn-out body substance, and to provide n
material for the growth of the young child
animal. But I may not say more on this subje
as it does not actually deal with poultry-feedi
May I be allowed to add, that I think the auth
have done a great service to the public in publi
ing this admirable work in such a cheap editi
which places it within the reach of everybo
"Food and Health" can be obtained for 2/-
paper covers, 3/6 cloth. The publishers
Messrs. Longmans, Green and Co.

The pullets should now be in their perman
quarters, and they want really well feeding
they are to come into production, and to k
up a high standard of laying throughout the wi
months. The nights are becoming longer,
for that reason the last feed should be a substan
one—a good two ounces of grain half an h
before the birds perch is required for the aver
pullet. There should be some method in the fe
ing. Some of my readers give half an ounce
bird as the first feed in the morning, and 1½ oun
as the last feed at night. While I am a g
believer in a scratch feed directly the birds c
off the perch, especially during the winter mon
as nothing stimulates them more than scratch
it should be but a scratch feed, and they sh
have the two full ounces at night. Even if
wet mash I am a great believer in this early m
ing scratch feed, it will stimulate them better t
a hot mash, and further, it assists in the be
assimilation of food.

Several letters have been received of lat
which the writers complain that pullets star
to lay are laying double-yolked eggs, also s
less ones, and there have been one or two case
layers' cramp. The question comes as to ho
treat these birds, and I am asked if the ma
too stimulating. One has to think of these l
as individuals—by that I mean that in every
there may be a highly-fecund pullet just co
into lay. At that time, in her case, the ovary w
be abnormally active, with the result that she
duces double-yolked eggs, or lays at such a
that she cannot shell her eggs. She is abno
and the flock cannot be treated for the indivi
She would be better removed from the pen,

(Continued at Foot of Column Next Page).

The Cure & Prevention of all Diseases of Poultry associated with their Respiratory Organs,

Known As

OLDS, CATARRH, OR ROUP, DIPHTHERITIC
ROUP, MOUTH CANKER, BIRD POX, OR CON-
TAGIOUS EPITHELIOMA, Etc.

By **ALBERT H. BRAIN.**

(*Continued from Page* 193).

n the case of a flock, where cases of running trils have commenced, owing to draughty, damp, ill-ventilated houses, it seems quite a simple ng in itself, but the irritation, setting up inflamma- of the mucous membrane, if neglected will turn things more serious. Colds may go on for days, apparently ease off, one nostril perfectly cured as vere, then the other drying up becomes clogged dried mucus, or both may become so, the bird ng forced to breathe through the mouth, which n causes an ailment called pip (the tongue gets k and coated white), to develop.

lere, of course, the system of purification is upset, blood poisons being denied proper exit, begin to vd the system, and consequent lowered standard of lth is set up.

ertainly extra strain is put upon the other nostril ch works overtime, trying to do double duty, ing that the other will clear itself, and do its own in time.

his inflammation, beginning in the nasal passages, n neglected, soon spreads, affecting the sacs round eyes and to spaces immediately below the eyes, re the formation of cheesy growths, both there in the mouth, trachea, etc., soon begin to show nselves.

Vhere this happens, matters not having re-adjusted nselves, the bird gradually gets worse, coughing sneezing, scattering germs broadcast through the In the case of eye roup, or wet roup, as it is ed, another result of choked nasal passages, full us, which become swollen until the eye is com- ely covered, the sight impaired and often entirely

his form of wet roup is not contagious, but another which is, will be closely following up.

isonous bacteria germs unable to find an exit, w up the cheesy deposits in the mouth and under tongue, in the cleft palate, in the mouth of the hea, and any place open to eruption that can draw ood from the blood, at the same time be near an space, which is in close proximity to the air.

ty the poor bird that suffers from both forms, eye roup, or swollen face, the most fertile field ncubating the diptheritic virus, it will take all her titutional vigour to combat the disease, which is making secure its home on the bird's system, with the best of proper treatment is extremely ult to remove.

Various methods of local treatment, and application having been tried in vain, it was decided to attack the disease internally, and by freeing the blood of the poisonous toxin to control the dreaded disease

Beyond keeping the facial area clear, the eyes, throat and mouth cleansed by swabbing, etc., the use of such things as tinctures, mixtures, etc., to put on them is pretty well hopeless.

What my investigations did prove finally, and without shadow of doubt, was that the stage between wet and dry roup was the period when the blood became poisoned with the bacteria of Diphtheritis, and specialised treatment along these lines became successful.

What is more I found that in breeding flocks where preventive treatment for Diphtheritic Roup, etc., had been given with the Visol antiseptic solution and method, the owners reported to me that no cases of B.W.D. or Coccidiosis occurred among the resulting chickens

This opened up new avenues for practical research, may be by rule of thumb, but one which in the years to come will be refined and improved by the scientists.

Now the bacteria or germ of Diphtheritic Roup and Bird Pox is said by Bacteriologists to be an infilterable one. That is it cannot be defined or even found, its shape or formation cannot be delineated under the microscope. This being the case, it must be so very minute, perhaps of such a varied character and so swift moving an organism that the more difficulty in isolating it is experienced. With such a mobile force operating in the blood stream no wonder it wrecks such a havoc once it gets a hold.

In the case of B.W.D. another toxic bacteria in the blood, this germ, or bug, as the pathologist calls it, has been isolated and cultured, and is called "bacilli pullorum."

Now it has appeared definite to me for some time, after following up cases of chicks that have developed B.W.D. from parents known to be free, blood-tested stock, parents that have given negative to any test of B.W.D. in their blood, yet the chicks have developed and report given as to B.W.D. being the cause. It is not for me to depreciate the value of blood testing. I do not wish to do that, but it does appear to me that if B.W.D. can be acquired in chicks from free parents, what a waste is going on by the blood-testing of

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MODERN POULTRY FEEDING.—Continued.

no mash and fed chiefly on good oats; nearly any mash would be too stimulating for these birds for the **time being,** in a little while the ovary becomes less active and the eggs become normal. In only two cases has there been reason to think the ration was too stimulating, i.e., an excess of animal protein; in three cases the birds were given wet mash in addition to the dry, and each of these a larger percentage of birds were affected. In the rest it was simply the great activity of the ovary, and was not brought about by any conditions of feeding.

parent stock. Now where chicks suffer and die from B.W.D. there must be some cause for this, and most poultry-breeders of experience agree that any baby chicks exposed to chill or cold in the between stage of incubator to brooder period, produce a predisposing condition which brings about B.W.D., from which it generally dies.

Now my practical beliefs are these, and poultry-keepers may take it for what it is worth, and that is B.W.D. is no more or less than a condition of Diphtheritic Roup, which, instead of throwing up a canker eruption or epidermis in the mouth and facial area, finds it best base of operation in the baby chick, in the alimentary canal, the intestines, where it sets up such a source of constant irritation and inflammation that the chick becomes seized with a kind of stricture or partial paralysis of this functionary and serous fluid being given off, which is vacuated and gums up the vent.

Similar methods employed with dealing with Diphtheritic Roup have reduced loss from B.W.D., and in numerous cases cured them, although the best work has been accomplished by treating the breeding stock throughout the breeding season. It is the same with Coccidiosis as B.W.D. Cleanse the blood stream with a live internal antiseptic, and you reduce the risk of sickness and loss accordingly.

I have tested this pretty thoroughly, and hope through the forthcoming season to carry out further practical experiments to further confirm my present findings; in the meantime, any breeder so troubled is invited to get into touch with me on the subjects. If they fear the risk of an outbreak to do so at once, so that I may be permitted to suggest a line of prevention that will prove efficacious.

Returning to the methods of treatment for Diphtheritic Roup, etc., by controlling the water supply and proper medication of the drinking water and wet mash, with Visol, Diphtheritic Roup and its adjacent ills can be sufficiently prevented and cured.

Take Mr. Toovey's farm. There, when the Visol measure was taken, the birds were in nothing like the best of bodily condition. The majority had lost weight, many in a declining state of emaciation, and were beginning to look very anaemic and debilitated. I recognised then that there was no time to be lost, and it was a fight against time. True we did lose some birds at the commencement and destroyed a number that had both eyes eaten away, and could not see to eat. There was nothing for it but to destroy them. Of the birds that where left with good eyesight, when my assistant and self set to work, we lost very few.

In the case of any outbreak of Diphtheritic Roup, etc., hospital accommodation must be provided in an isolated position for extreme cases, and attendants should keep a special overall or coat in which to treat the birds, in addition to carefully disinfecting both hands and boots before returning to the farm. If great care and precision are not observed with regard to burning the swabs, dead birds, etc., amongst the hospital cases, great progress cannot be made towar recovery from the outbreak, as constant re-infecti will be liable to occur at any time.

The astute owner or manager will personally sup vise and inspect his stock regularly once or tw a week, or at least visit the poultry house at nig listening for coughing or shrill noises emitted by t birds, indicating the presence of croup, bronch catarrh, etc., which may later develop if neglected i serious trouble. All such birds should be remov and treated immediately, and general flock preve tive treatment given at once in order to check a further development. Where there are many cases would be as well to remove the birds to small pe or coops, but this is a matter for the poultry-ma own judgment.

Bodily vigour and constitutional vitality plays great part in the cure and prevention of disea Birds poorly fed and lacking tone are more liable disease in any form and in poorer fettle to combat where it is present. Proper nutrition, therefore, is great stand-by for the stock, helping them to keep to fight the terrible scourge, as indeed it is if allow to get hold on the flock, as many breeders kno whose farms I have handled during terrific outbre for the past few years, but whose names I am permitted to divulge under severe penalty in so instances.

From the foregoing matter the reader will reac see the process of deterioration that is fast going where roupy colds and catarrh once get a thoro hold on the stock. For the large poultry-keeper it one of serious concern. Nevertheless, no one m suffer much loss as to be out of the business disease in the future, if only they will take heed now

For some time I have lived with joyous optimi visions of a British Commercial Egg Industry f from ravages of Roup in any form. That £18,000, sterling in egg values which Capt. Keevil told about at the National Poultry Council Meeting Harrogate, in July, 1925, which we pay away e year to other countries to keep us in eggs for home c sumption can now be saved. I well remember Tom Barron's words in an inspiring message to at the first National Poultry Council Meetin Preston, years ago, who told me that the man could free England of Roup held the key to for egg menace in our land.

To-day I say it quite optimistically with a knowledge and understanding of the meaning t the day has arrived. We can go forward with satisfaction of knowing that never more need R in any form wipe out breeders or commercial ducers as it has been doing for many years past.

Chapter II. of this series of articles will deal w different stages in the treatment for Cure of D theritic Roup, giving illustrations of the method holding a bird for easy and quick examination, how to make and apply the Chlorine Gas Treatm for cases of Wet Roup, arranging for scientific ven tion in the poultry house, and the elimination draughts, cross currents, etc

ome Fruit-Growing Notes
to help Poultry-Keepers.

By F. W. WHEELER, F.R.H.S.

UTUMN NOTES No. 2.—I have often advocated wisdom of planting fruit trees in land on which ltry are kept in order to obtain an additional me, and after reading an article in a daily newser on "Road Fruit Trees," I could not help feel- more sure than ever that fruit growing on nite lines should be a paying concern for the poulkeeper, if properly done.

he article I refer to was on beautifying the monous nature of the new main roads that are being structed all over the country, and it stated that—

> "Under the provisions of the Road Improvement Act it is probable that a comprehensive scheme of fruit-tree planting along such roads will be started shortly.
>
> A Ministry of Transport official stated that under the provisions of the new Act the Minister may make a grant of up to 50 per cent. of the cost of tree-planting schemes and of guards and fences necessary for the protection of trees. This latter provision will facilitate the plans for planting fruit-trees.
>
> Apple trees have been planted at the side of some of the roads of Bath and in the parks. Fears that the youth of the city would be tempted to steal the fruit have proved groundless.
>
> On the Continent fruit-trees—cherry, plum, peach, apple, and pear—are planted at short intervals, along some roads, notably in Hanover, where they are tended by local officials. A local auction for the fruit is held, and the price suffices to pay the cost of maintenance."

ow if fruit trees can be made to pay when planted uch a spread out area, and with all the additional of care and cultivation, there can be little doubt the poultry-keeper must see a good return for his tal outlay by planting his runs with suitable trees. ersonally I am not yet convinced that "Road -trees" will be a success, for those growing fruit w the importance of economical cultivation, and need not only of keeping down the overhead nses, but of seeing that the soil and situation are suitable for planting; a thing not always likely e found on an extended roadway.

need hardly repeat in detail to-day the natural s and gains that poultry-keepers have towards ing fruit growing a paying concern with the valuaid of their birds.

have dwelt on this before, but in writing these umn Notes, I want to remind readers who may be king of planting fruit trees to study a few imporpoints.

is just the time of year when our thoughts turn is work, but because the work does not start until ember or December, certain essentials are not idered sufficiently in advance. Even these notes ld be rather late for any considering the question lanting on a large scale.

Let me, therefore, suggest a few points for immediate consideration:—(1) Have you ascertained from an experienced grower, or from your County Expert Advisor, if your soil is suitable, not merely to grow fruit, but to give you paying crops? One can often have a very good idea as to this by noting how fruit trees are succeeding in adjoining land or gardens, and it is also a very valuable guide as to which of the varieties of fruit-trees will be most suitable for your particular soil and situation.

Having satisfied yourself on these points you should make up your mind with as little delay as possible as to the number of trees you propose to plant this year, and place your order as quickly as possible with some reliable nurseryman.

Do not put off planting until the early months of the year unless it is quite impossible to do so before Christmas. Even if compelled to wait until the early months of the year, the trees should be ordered and delivered to you for heeling in before the end of December.

In selecting varieties bear in mind which will be best for your local market, or wherever you think of selling your produce.

For the poultry-keeper I advise starting with apples, and not too many varieties at first; this simplifies matters for the beginner.

Other points for consideration are age of trees to order, and the need of interplanting different varieties of the same kind to help the pollinization of the blossoms, for some trees do not do well unless fertilization is thus helped by pollen from another variety. To give only one example: Cox's Orange Pippins will do much better when some Worcester Pearmains are planted near them.

As regards ages of trees for planting, I think the two to three-year-old ones are the best. These young trees settle down sooner to the soil, and quickly overtake older ones. I have repeatedly noticed this; in fact, some growers recommend the "maiden," but for the beginner I would advise the two to three-year-old tree as the foundations of a good head will be there ready for him to further develop.

Next week I will continue with some more notes bearing on the same subject.

GLOUCESTERSHIRE EGG-LAYING TEST.

For Month Ending August 14th.

The following is the report on the Gloucestershire Laying Test (under the supervision of Mr. L. G. Price, County Instructor in Poultry Keeping), for the eleventh month, ended August 14th:—

During the past month 4,434 eggs have been collected, against 4,850 the previous month, giving a total of 53,817 for the eleven months, and an average of 168.7 in respect of the 319 pullets entered. Some of the birds are still showing signs of moult; the general health of the flocks is good. Grade A eggs count 5 and Grade B 3 points. There are still a few vacancies in the single bird section, and early application is advised.

Section A. (1). White Wyandotte (Professional). (Five birds constitute a pen).—R. Ludlow Hewitt, 4,186 pts.: E. J. Stone, 4,057; P. M. Hinton, 4,052; H. Bennett, 4,008; J. E. Boyd, 3,963; H. W. Fowles, 3,844.

Section A. (2). A.O.V. Heavy Breed (Professional).—Miss M. Lawrence (R.I.R.), 4,025; J. G. Herbert (R.I.R.), 3,990; G. H. H. Simmons (L.S.), 3,827; C. G. Young (R.I.R.), 3,748; M. C. Beale (R.I.R.), 3,648; W. R. Partridge (R.I.R.), 3,564.

Section A. (3). A.V. Light Breed (Professional).—Miss N. Townsend, 4,567; Miss H. Baylis, 4,563; Sherborne Park P.F., 4,310; Mrs. W. Pearce Ellis, 4,186; G. H. H. Simmons, 4,147; Cotswold Pedigree P.F., 4,082.

Section B. (1). A.V. Heavy Breed (Confined to owners of not more than 50 laying head).—Miss M. Brown (W.W.), 4,203; Maisemore School (W.W.), 4,090; A. W. Moses (L.S.), 3,909.

Section B. (2). A.V. Light Breed. (Confined to owners of not more than 50 laying head).—L. Grist, 4,202; C. E. Skirten, 4,013; J. [illegible] Crowdson, 3,726. All White Leghorns.

(Continued at Foot of Column Next Page).

MARKET REPORT.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, SEPTEMBER 18th, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in larger supply and is cheaper at London and Hull, the average quotation now being 11s. 7d. per cwt. Finest samples of malting barley are scarce and sell readily at fully recent rates, making up to 23s. per cwt. at London, but ordinary samples, with larger supplies available, have an easier tendency. Moderate quantities of oats of variable quality are being marketed, and generally meet a fair demand at recent quotations, white varieties averaging 10s. 1d. and black varieties 9s. 5d. per cwt.

Imported wheat is in moderate supply and generally realises less money, No. 1 Manitoba at an average of 15s. 3d. per cwt. being 4d. per cwt. cheaper on the week. Foreign feeding barley is in slow demand and prices at Bristol have declined considerably on the week. Imported oats mostly sell at about late rates, but at Bristol prices are reduced 3d. per cwt. Maize is in little request, but quotations are practically unchanged on the week.

Milling offals and meals generally meet a quiet trade, and most price changes are in a downward direction. Bran now averages about £7 4s. and coarse middlings £9 5s. per ton, as compared with £8 2s. 6d. and £10 7s. 6d. in the corresponding week of 1924 Linseed cake is cheaper at most markets.

MILLERS' OFFALS.—Bran (British): Bristol, £7 15s; Hull, £6 12s; Liverpool, £7 5s; London, £7 5s. Broad Bran: Bristol, £9; Hull, £8 2s; London, £8 10s. Middlings—Fine (Imported): London, £9 7s; Coarse (British): Bristol, £10; Hull, £9 5s; Liverpool, £9 5s; London, £8 10s. Pollards (Imported): Bristol, £7 17s; Hull, £7 5s; London, £7 5s. Rice Bran: Bristol, £7 17s; Liverpool, £7 5s. MEAL.—Barley Meal: Bristol, £10 10s; Hull, £11 8s; London, £11 10s. Maize Meal: Bristol, £11 15s; Hull, £10 12s; Liverpool, £11 5s; London, £12. Maize Meal (S. African): Bristol, £10 15s; London, £9 15s. Maize Germ Meal: Hull, £10 15s; London, £10 5s. Maize Gluten Feed: Bristol, £11 15s; London, £10.

EGGS AND DEAD POULTRY.

Week-end Prices—Eggs (per 120): British, 21s 3d, 17s 3d; Irish, 19s 3d, 18s 3d; Danish, 20s 3d, 19s 0d; Dutch, 21s 3d, 19s 9d; French, 19s 9d, 18s 0d; Belgian, 19s 0d, 18s 0d; Italian, 17s 9d, 16s 9d; Lithuanian, 16s 0d, 15s 0d; Polish, 13s 0d, 12s 0d; Chinese, 13s 6d, 12s 0d; Russian, 14s 0d, 12s 6d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish, 1s 3d, 1s 0d; Others, 1s 6d, 1s 1d. Ducks, 1s 4d, 1s 0d. Geese, 1s 0d, 10d.

EGGS.

Per Doz.—Ashford: First, 2s 5d; Second, 2s 3d. Birmingham: First, 2s 2½d; Second, 2s 0d. Bridgwater: First, 2s 6d; Second, 2s 3½d. Chelmsford: First, 2s 1¾d; Second, 2s 0½d. Colchester: First, 2s 3½d: Second, 2s 0d. Doncaster: First, 2s 3d; Second, 2s 1d. Dorchester: First, 2s 6d: Second, 2s 5d. Exeter: First, 2s 1d. Hereford: First, 1s 10d. King's Lynn: First, 2s 1d; Second, 1s 11d. Llandilo: First, 2s 1d; Second, 2s 0d. Mold: First, 2s 3d: Second, 2s 2d. Newport (Mon.): First, 2s 3d; Second, 2s 1d. Norwich: First, 2s 1d. Oswestry: First, 2s 4d. Penzance: First, 1s 10d; Second, 1s 9d. Saffron Walden: First, 2s 4¾d; Second, 2s 1½d. St. Ives (Hunts): First, 1s 11d: Second, 1s 10d. Salisbury: First, 2s 5d; Second, 2s 4d. Skipton: First, 2s 0d. Truro: First, 1s 11d; Second, 1s 10d. Welshpool: First, 2s 1d; Second, 2s 0d. *Carlisle: First, 2s 6d. *Derby: First, 2s 1d. *Ipswich: First, 2s 3d; Second, 1s 9d. *Lincoln. First, 2s 3d. *Shrewsbury: First, 2s 3d; Second, 2s 2d. *York: First, 2s 4d; Second, 2s 3d.

FOWLS.

Per lb.—Birmingham: First, 1s. 2d; Second, 10d. Doncaster: First, †5s 6d; Second, †5s 0d. Exeter: First, 1s 4d. Hereford: First, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 7d; Second, 1s 5d. Newport (Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 4d. Welshpool: First, 1s 4d; Second, 1s 2d. *Derby: First, †5s 0d; Second, †4s 6d. *Ipswich: First, 1s 6d. *Lincoln: First, †5s 0d; Second, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: First, †5s 0d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 1s 0d. Doncaster: First, †5s 6d; Second, †5s 0d. Exeter: First, 1s 3d. Hereford: First, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 7d; Second, 1s 6d. Welshpool: First, 1s 3d; Second, 1s 0d. *Derby: First, †4s 6d; Second, †3s 6d. *Ipswich: First, 1s 5d. *York: First, †5s 6d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

Pen Duck Section. (Four ducks to a pen).—G. H. Simmons (K.C.), 724; G. B. Young (K.C.), 698; S. J. Phillips (K.C.), 606; Major J. G. Dugdale (K.C.), 593; Sherborne Park P.F. (K.C.), 567; W. R. Partridge (W.R.), 516.

SINGLE PEN SECTION.

Section 1. White Leghorns.—L Grist (31), 1,035; G. H. H. Simmons, 988; J. L. Brown, 980; H. W. Stephens, 963; Miss K. Feaviour, 952; Miss R. E. L. Shearn, 939.

Section 2. White Wyandotte.—H. W. Fowles, 1,071; Lord Sherborne (37), 937; W. R. Partridge (34), 904; W. R. Partridge (38), 891; Philip Clapham (40), 876; G. H. H. Simmons (31), 848.

Section 3. Rhode Island Red.—Miss M. Lawrence (59), 999; G. B. Metcalfe, 806; Miss M. Lawrence (42), 749; S. Barnes, junr. (48), 661; W. R. Partridge, 645; A. Daunton, 567

(Continued at Foot of Next Column).

"Eggs,"—September 23rd.—Contents.

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Contributions.—The Editor will always be pleased to consid contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, T Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beech Rudgwick, Sussex.

All communications with regard to Advertisements should addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Stre London, S.E.16. Telephone: HOP 894.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it imperative that new advertisements and alterations are receiv by FIRST POST ON FRIDAY MORNING to ensure insertion in t following Wednesday's issue. It is hardly necessary to add th the earlier in the week we receive copy the better it is for eve one concerned.

Classified Advertisement Rates will be found at top of first pa of classified advertisements.

PROOFS.—We cannot guarantee to submit proofs unless co plete copy is to hand by FIRST POST ON THE MONDA PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSU

KEIGHLEY AND DISTRICT BRANCH OF THE SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

At the cordial invitation of Mrs. Clay, M.B.E., their Honora President, a party of members of the Keighley and Distri Branch of the Scientific Poultry Breeders' Association left Keig ley on Saturday, the 15th August, and travelled by char-a-ba to Riddings, Long Preston. After an enjoyable drive throu the Mountain Limestone country, with its spacious scenery, t party were received by Mr. and Mrs. Clay.

A visit was paid to that part of the poultry farm connect with a breeding and rearing. White Leghorns, Black Leghorns, a White Wyandottes are the chief breeds kept Much interest w displayed in the pens of the three breeds, from which the bir now holding leading positions in the main laying tests we bred. It was remarked that the arrangement of the breedi pens was excellent, and the equipment splendid. The range small houses, with grass runs attached, in which stock birds a accommodated. attracted great attention, and were commented favourably. The birds were in the best of health, and the colo of the white breeds was snow-white.

Mrs Clay had hospitably asked the members to tea, and th was served on the lawn in charming surroundings, overshadow by tall and venerable elms. After tea the party proceeded way of an old-world garden, with its wealth of rose-bloom, Cornish sun-dial, and its wall fruit, to the large colony hou where 200 birds are trap-nested. Nearby are several large pe in which cockerels hatched this year are run on, away fro the pullets.

Mr. Frank Snowden, in a characteristic and happy spee called on the members of the party to give a very hearty vo of thanks to Mr and Mrs. Clay for the splendid afternoon th had given them This was seconded by Mr. Harold Walker, a was carried in true Yorkshire fashion. After responses by Mr. a Mrs. Clay, the party left The Riddings for the return journ home.

(Mrs.) A. WILSON, Hon. Secretary.
Minorca Farm, Denholme, Bradford.

Section 4. A.O.V. Light Breed.—Churchdown P.F. (Ancon 948; H. W. Stephens (B.L.), 812; Churchdown P.F. (B.L.), 702; Maj J. G. Dugdale (B.L.), 687; Miss K. Feaviour (B.L.), 682; G. Young (B.L.), 675.

Section 5. A.O.V Heavy Breed.—Miss M. Lawrence (Buff R 853; G. H. H. Simmons (Buff R.), 841; W. R. Partridge (B. Veld 821; Mrs. V. Weinholt (Aus. Orp.), 798; Lady Bledisloe (Aus. Orp 781; R. T. Miles (B Veld), 704.

Section 6. Ducks.—Mrs. H. L. Hanks (K.C.), 283; H. W. Fowl (K.C.), 232; Mrs. W. Pearce Ellis (K.C.), 192; F. L. Walters (7) (W.R 177; W. R. Partridge (15) (W.R.), 167; Miss N. Townsend (12) (K.C 136.

(Signed) R. A. and A. M JOHNSON,
The CotswoldPoultry Farm, Chalford.

H. S. WRIGHT, Hon. Sec.,
Shire Hall, Gloucester.

EGGS

THE OFFICIAL ORGAN OF THE

Scientific Poultry Breeders' Association

WEDNESDAY, SEPTEMBER 30th, 1925.

Editorial.

EGG SIZE AND THE MARKETS.

correspondent recently forwarded us a letter from rm of egg merchants, acknowledging receipt of two ės of eggs. The following is an extract from the er:—

> "On opening the cases which you sent us, we find that the eggs are only small pullets, and very little bigger than pigeons' eggs; not only that, but they are very white in colour, and will not realise more than 1½d. each in the retail shops. We must impress upon you, if you send any more, they must be large in size and of good colour; otherwise we certainly cannot realise anything like a price."

)ur correspondent comments on this as follows:—

> "It astonishes me to find that there is no market in A——— for pullets' eggs, and to find that no white egg is wanted."

'his is hardly what the letter conveyed. Presum- y they were pullets' first eggs, and the merchants bably felt compelled to draw the producer's atten- to the fact that they would realise a very low e; for it must be confessed, that a very large nber of producers are of opinion that an egg is an , and are, or pretend to be, very indignant when y are informed that many of their eggs are second- le. Anyone who has had experience of co-opera- societies is aware that a large number of the reholders have, to put the matter politely, very at difficulty in distinguishing between a 1½oz. and z. egg. What the firm probably meant to convey, that a tinted egg would fetch a higher price than hite one; they did not say, "no white egg is ted."

Iowever that is a little beside the question. The ll egg problem is still with us. The trouble is t while the middleman will pay us for first and nd grade eggs, and throw us a dole for "smalls," will not grade "special" and "extra special." Morris Hammond drew attention to this some nths ago in "Eggs," and explained a contract which had made, but suggested at the time that the nces of renewal were small, as the firm thought, that they were paying too high a price, but that was getting too much money—at least, that is the only construction we could put upon it. Had there been a few commercial egg farmers who would have supported Mr. Hammond, that contract might have been renewed to the benefit of all. For, let there be no mistake about it, there is a good and steady demand for the English new-laid egg, properly marketed.

We are constantly reminded of the superior manner in which the Danes and others market their eggs, and it is certainly irritating to a degree to read in foreign papers that the English egg is badly marketed, often in a dirty condition, and encouragement given to the foreigner to come in and capture the finest market in the world. If the Marketing Conference, which is to meet in October, is to do any real good, it will have to recognise in the first place that legislation will be necessary to stop the sale of dirty or unclean eggs, to make it an offence to sell a bad egg. If this is not done, the marking of the Imported Egg will be the finest possible advertisement for it. It seems difficult to make the average producer realise that the good name he makes for himself will often be blackened by the man who is careless or dishonest as to his marketing. One finds it very hard to get over the heavy loss (£600) in one year by the Anglesey Society, owing to the number of bad eggs sent in by members, and let us appreciate that in the vast majority of cases this must have been deliberately done, and no punishment could be meted out to these individuals who not only defraud the consumer, but prejudice the public against the English new-laid egg to the serious loss of the honest producer.

But it is rather with the question of the small egg we are dealing, and not the bad one. We have bred for high production, and it has resulted in a decrease in the size of the egg. It is said we cannot have it both ways—i.e., size of egg and numbers, but is this the case? or are we accepting as a profound fact what is only half a truth? We believe it is only half a truth—true in so far that if you breed only for numbers you will not get size, but that it is possible to obtain both size and numbers hardly admits of doubt. The first factor of importance is the necessity of recognising that the loss of egg size has been, in the main, due to the persistence with which the breeder has bred only from his highest fecund stock, and has refused to throw out the precocious pullet. It is not because he has bred from his highest fecund stock that the mischief has arisen, but he has bred without discrimination. The second is that we have bred for high fecundity, and have not bred for size of egg. Let us take the Wyandotte. They are admittedly layers of small eggs, in some cases eggs which are hardly marketable. Its prolificacy it undoubtedly owes to the

Hamburgh blood, and to that, too, we must attribute the small egg; but all Wyandottes do not lay small eggs, and we may safely conclude that while the great majority inherited the small eggs and prolificacy of the Hamburgh, there were others which inherited the prolificacy of the Hamburgh and the large egg size of their other progenitors. In his splendid book, "Experiments in Animal Genetics," Major C. C. Hurst deals with the question of egg size, and from it we take the following extract. It will be important to remember from the first that small egg is dominant to large. We can speak as to the demand for large-sized egg Wyandottes, and it would be decidedly a profit-bearing proposition if a great effort were made to breed them without lowering their prolificacy.

"INCREASING EGG SIZE."

> "The sixth genetic factor N., which determines the size of egg, is a most important one in egg production, especially in the White Wyandotte. Here, again, the recessive nn is required to produce large eggs. Many breeders seem to think that if they set or incubated large eggs only, that solves the problem, but that is far from being the case. These experiments show clearly that it is the large egg *mode* (nn) that is important. Many hens lay a few large eggs, but have a small egg mode (N). In such case her large eggs would only breed pullets with a small egg mode like herself, everything else being equal. Large egg mode being a simple recessive character (nn) breeds true, the nn hens are easily selected by their performance; and the only difficulty is to secure the nn cocks.
>
> Cockerels should only be bred from large-egg mode hens for several generations, and tested as cockerels with nn hens. If any of the daughters have a small-egg mode they should not be used in their second season for breeding as cocks. On the other hand, if all their daughters have a large egg mode, they are nn, and can be used for breeding, giving rise to a permanent strain, which under normal conditions will not change.
>
> Several striking cases of this were found in these experiments, and a large egg strain of White Wyandottes was established at the time of the outbreak of the war."

Undoubtedly the males present the greatest problem, as the introduction of a small-egg mode male would upset the work of years.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The Financial Year began on 1st September.

Modern Poultry Feeding.

By TOM NEWMAN.

SIZE AND FEED.

A new reader writes to say that he is thinki
of breeding exhibition White Wyandottes, and
he notices that the fancier manages to ben
much bigger birds than the utility breeder, he as
whether this is due to his superior knowledge
feeding, or to some other cause. I don't thi
the fancier would claim that he has a great
knowledge of feeding than the utility breede
The size of his birds, which is a fetish of mo
fanciers, is almost wholly due to his methods
selection and breeding, and has very little to
with feeding at all. No manner of feeding w
enable a bird to exceed the size which it h
inherited; good feeding may help it to reach t
uttermost limits of that size, just as underfeedin
would prevent its doing so. It is correct, as m
correspondent indicates, that many fanciers fe
bone meal to "make bone"; but unless there w
a shortage or deficiency of bone-forming materi
in the total ration, this is so much waste. Size
obtained by careful selection, the slowest maturin
birds—that is to say, those which mature sexual
latest—are those which will give him the size h
requires. Early maturity, which to the utili
breeder is economical, is the bête noir of t
fancier. A pullet which lays at six months
ruined from his point of view, and he does a
he can to prevent her doing so. The same remai
applies to cockerels. Big boned birds are seldo
good layers, because a pullet which is producin
eggs from the time she is six months old cann
build up a big frame. In reply to his question
to bone meal or a salt mixture, I should thin
this entirely unnecessary for birds on free rang
especially where there is good pasture. I hav
great faith in it, on the average commercial eg
farm, where 400 birds are carried to the acre,
with birds kept intensively. In answer to h
question as to feeding for feather, I must ref
him to last week's Editorial.

The next question has to do with egg size a
feeding. Here again, there is little that can b
done. If the ovary is stimulated by feeding
excess of animal protein, or by the addition
spices to the mash, there will be a temporary i
crease in the size of eggs, and there will be
good many with double yolks, but after a ti
the ovary will cease to respond to these stim
lants, and the last state of that hen will be wor
than the first. An under-nourished pullet will
necessity lay small eggs; when the body fat
exhausted, eggs will become smaller. The rati
which will keep the pullet in the best bodily co
dition will give you the largest eggs you can g
from her; if she is overfat, you will get sma

gs. Size of egg is hereditary, and we cannot
d for big eggs, we can only feed to keep the
d in such bodily condition as will enable her to
the size of egg she has inherited.

“Pullets with ruffled feathers, blood in the
ppings, and generally unsatisfactory look;
ase report on sample of mash sent, and
eat and oats.” The mash was not satisfactory,
n poor, clover meal with a lot of stalk, and a
r sample of feed oatmeal. The wheat and oats
e of fair average quality. There is too much
igestible matter, and that accounts for the
ected condition of the pullets; it was not, as
correspondent suggests, a “cheap” mash at
- per cwt. Such inferior stuff is not worth
ing. It would not be more digestible if scalded
rnight and fed in the morning. You can't
ke this fibrous matter more digestible by
king.

Vith regard to the very numerous questions as
the feeding of birds during the moult, which
l continue to arrive, may I point out that there
o need for any change in the diet of the moult-
hen. “What will make feathers will make
s” may be changed to “What will make eggs
make feathers.” If a bird is in a good bodily
dition she will moult well enough without any
istance on our part unless something abnormal
pens. All we have to worry about are the few
r individuals which “hang” in the moult; in
event the addition of 4 per cent. linseed meal
he mash, and an iron tonic, with plenty of
n food, is all the assistance that is required.
ve rarely found these individuals worth bother-
about.

he determination of sex will always appeal
s, I suppose. A new reader from the North
es along with what he calls a new theory. He
eves that if we were to feed to increase the
content of the egg there would be a very great
ease in the percentage of pullets, and a cor-
onding decrease in the percentage of cockerels
urally). The only question is as to whether
could feed to increase the fat content of the
assuming our friend from the North to be
ect. May I just say that he is wrong in assum-
that his theory is a new one; it was published
Eggs” some five years ago, I think. May I
him to indicate how it would be possible to
to increase the fat content of the egg. I am
id that I am getting very sceptical as to feed
y way influencing sex, in spite of experiments
green fly and tadpoles which have already
published.

experiments on which the slightest reliance
be placed as to the influence of spices and
iments on egg production have ever, as far
am aware, been carried out in this country.
he humbug of the much advertised spices and
testimonials which accompany them we can
as humbug in the first place, and the testi-
als come from ignorant or unobservant people.
s which have been made as to their influence
eding cattle, etc., have all demonstrated that so far from having any good influence, they have in some cases had the reverse. For example, a well-known and much advertised cattle condiment, which has a huge sale, was tested in America, and found to be entirely useless. Ninety per cent. of these spices contain iron in some form, the rest of the ingredients being made up of cayenne pepper, fenugreek, gentian, aniseed, locust meal, etc. Birds in health and production need nothing of this kind, and those out of condition should be pulled round with a change of food, and 2 per cent. cod liver oil mixed with the mash or the addition of 4 per cent. linseed meal. This in answer to “E.K.K.,” Aylesbury, who at the same time is advised to see that his birds are free from insect life and are not overcrowded, as the feeding, as far as I can gather from his letter, is perfectly correct.

If “Beans,” Attleborough, replaces half the meat meal with soya bean meal, this will be the correct proportion. In answer to “G.M.B.,” West Bromwich. Feed oatmeal is rougher to the touch than S.G.O., contains more fibre, and particles of the oat kernel are easily discernible.

FOREIGN EGGS AS NEW LAID.

ISLE OF WIGHT POULTRY FARMER FINED £10.

At the Isle of Wight County Police Court on Saturday, before Mr. G. Shedden (in the Chair), and other Magistrates, Wm. Gilley, of Freshwater, a poultry farmer, was summoned for selling imported eggs as new laid.

Mr. E. Parker appeared for the defendant.

Police-Sergt. Randall, stationed at Yarmouth, said that on Tuesday last he visited the West Wight Poultry Farm, Totland, in plain clothes, and said to the defendant, “I believe you manage this poultry farm,” and he replied, “Yes.” The officer then asked, “What eggs do you sell, imported or new laid?” and he replied, “New laid, every one—all guaranteed new laid.” In a box in a shed, witness saw eggs which defendant said were sent to him by Mr. Snooks and which were guaranteed all new laid.

TESTED THEM.

“When did you receive them?” witness asked, and he replied, “Yesterday,” and added, “I have sent forty dozen to the Totland Bay Hotel this morning, and I tested them before I sent them.” Witness asked, “Why do you do this if they are new laid?” and the defendant replied, “To see that there are no bad ones.” Witness examined the box, which bore the stamp “Fresh Danish Eggs.” Defendant then said, “Well, they are as good as new laid, and I sent the box to the Totland Bay Hotel.”

“What have you charged?” asked the Police-Sergt., and defendant replied, “2s. 9d. a dozen,” which witness pointed out was the price of new laid eggs. Witness had found out that since the

(Continued at Foot of Column on Next Page).

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

A. F. (Ossett) writes:—"I have tried breeding turkeys, and have had one male bird and three hens; the male bird is three years old. and the hens are two years old, and have not had a fertile egg all the year. Some people tell me the male bird is at its best at three, and some say I want a one-year old for breeding." What a confusion of ideas. If a male is over-mated in the previous year, he will often prove very infertile the next, a bird may become too heavy for breeding. The best mating is a year-old male to second year hens; if older males are mated, it is always wise to have one in reserve.

K. J. (Wantage) wishes for a formula for twenty Leghorn Pullets. The following is a good one:—Alfalfa Meal and Bran, 1lb. each; Middlings, 4lbs.; S.G.O., Maize Meal, and Meat and Bone Meal, 1lb.; Grain, Kibbled Maize. If the mash is fed dry it should always be before the birds; if wet, they should be allowed 2½ozs. each before scalding. Reduce this amount if it is found they do not eat the mash up cleanly

W. D. (Leith) tells me he has had five years' experience with poultry, but is a new reader of "Eggs." He realises the benefit of good housing, regular feeding, floor and ground space, perch room per head, green meat, charcoal, oyster shell, grit, fresh water, and observation with eyes, nose and mind. He wants dry mash for rearing, breeding and laying for winter and summer, and the grains to be used with the various formulae, and also wishes to know whether I prefer wet mash for breeders. — For rearing chicks a week old the following will be a useful mash:—Bran 3lbs., Alfalfa Me 1lb., Middlings 4lbs., Sussex Ground Oats a Maize Meal 1lb. At six weeks old another ½lb. Sussex Ground Oats should be added to the mash, a the Maize Meal reduced to half-a-pound. At fo months the bran should be reduced by one pound. five months the mash should be:—1lb. Bran, 1 Alfalfa Meal, 4lbs. Middlings, 1lb. S.G.O., 1lb. Fi Meal or Meat and Bone Meal. The grain feed can for the first month: Broken Wheat and fine-kibb Maize, 15 parts each; Split Groats, 10 parts. Aft the first month whole groats may be used. from t months old to five months. Good plump white o and small red wheat, three parts each; kibbled mai one part. At the laying stage the grain will be bett —three parts Kibbled Maize and one of Whe Breeders' mash:—1lb. Alfalfa; 1lb. Bran, 4lbs. Mi dlings, 1½lbs. Sussex Ground Oats, ½lb. Maize Me ½lb. Soya Bean Meal, ½lb. Meat and Bone Meal Fish Meal. My experience has been that, if anythi breeders do better on dry mash than wet.

W. B. (Lytham) is feeding pullets which are free range on the following wet mash with dry ma hoppers open all day:—6lbs. of Thirds, 2lbs. S.G. 2lbs. Bran, 2lbs. Meat and Bone. Dry Mash:—8l Thirds, 6lbs. Bran, 2lbs. S.G.O., 2lbs. Maize, 2l Meat and Bone; Grain, Wheat, Oats and Maize eq parts. "W. B." thinks that all his birds are a bit the light side If that is so I am unable to accou for it; there is an excess of animal protein, and I wo suggest to "W. B." that he simply drops his w mash, and feeds some of the dry moistened. T birds on free range will find plenty of insect life. bring the late March pullets into lay, all that wo appear to be required, if they are on the light si would be to feed kibbled maize three parts, and whe one part, and to see that there is adequate consum tion of mash, which is not always the case when bi are out on range.

Squirrel (Chester) complains of the colour of t excreta in young pullets, cockerels, and also layi hens. Land is badly drained, and is either mud brick land, hence no grass grows or stays long in t alternative runs. Dry mash available, three parts bran, one of thirds, one of maize meal, half of f half of meat meal. Grain twice a day, dressed kibb maize. The food is the same for all birds all the y round. Only greens available are sweeds and turn in garden, but these aggravate the trouble. Is t food at fault?—"Squirrel" wants a cheap mash t will do for breeders and layers and chickens. T

11th August defendant had sent 255 dozen eg to the hotel at 2s. 9d. per dozen.

Mr. Parker contended that in this case th was no sale, as the eggs were not accepted.

The Chairman: The charge is one of selling offering for sale.

Mr. Parker: We are not charged with that.

The Chairman: The Bench think that it is clear case. Defendant will be fined £10 or t months.

d is at fault. There will be two causes for this dition: (1) Excessive amount of animal protein. Excess of fibre. I would suggest the following a mash for layers and breeders:—1lb. Bran, 1lb. Alfalfa Meal, 4lbs. of good White Thirds, 1lb. each Sussex Ground Oats and Maize Meal, 1lb. of Meat l Bone Meat cr Fish Meal. This would do for eders. Replace Sussex Ground Oats with another t of Maize Meal for layers, add 2lbs. Bran and ther pound of Sussex Ground Oats for chickens.

. N. (Newstead) is worried, because of some of pullets are putting up wonderful records, and he rs the mash is too stimulating. It is not often t complaints reach me of this kind. There is hing wrong with the feeding, and my correspondent d be under no alarm on that score. If he had told that he was getting a large number of double-ked or thin-shelled eggs, some modifications might e been suggested, but this is not the case, and he uld carry on as he is doing. I have no doubt the lets will slow down in time. With regard to the nples sent, the fish meal offered at £18 10s. 0d. ton has an excess of oil, and its use is not recom-nded; the other sample is good; the feed oatmeal of good average quality.

. S. D. (Suffolk) had a handling expert to select a eding pen of Wyandottes for him in January last r; nine hens were picked from a flock of 62, which l averaged 170 eggs per birds. "L. S. D." mated se hens to a cockerel of 284-egg strain, for which paid £5. A" nicer-looking bird you never saw," the result has been disappointing in the extreme. llets were slow in coming into lay, and the average very much below that of the preceding year. Now . S. D." asks me to criticise the handling, "For," s he, "why should there be such a drop in the egg ld, if this is not the cause, my methods of feeding l housing being unchanged."—In answer to this I far more inclined to think that the failure is to be ributed to the male bird than to the handling test. course, there may have been mistakes on both sides, a reasonably expert handler would have picked out e good birds from such a flock with such an average ich should have bred pullets capable of making an ally good flock average if properly mated. I suspect cockerel, because the "284-egg strain" is all nbug, and the man who sold the bird knew it to "L. S. D." says he is a new reader. This explains y he does not understand how foolish it is to buy ls advertised in this way. There are good and bad every strain. A hen may be of "284 strain." at is to say, her great grandmother's cousin may e laid 284 eggs, but she herself may not have laid eggs, and as her son will inherit from her, and not great grandmother's cousin, it is the record of her- which counts, and not that of her strain. A icer looking bird" I may never have seen. That matter of opinion. What I suspect has happened hat "L. S. D." bought him from a firm who con-ntly advertise males in this way, and have not a p-nest on their farm. The handling test is, of rse, not so reliable as the trap-nest, but it is far re so than a cockerel of 284 strain.

POST-MORTEMS.

T. H. P. A ruptured uterus followed by peritonitis was the cause in the case of the W.L. hen. There was a cancerous growth involving the uterus, the rupture having taken place just anterior to this. Otherwise the bird was in good condition. Rupture of the uterus followed by peritonitis may result from over-fatness, mechanical obstruction, disease of the uterine walls, oversize, irregular or rough-shelled eggs, and soft-shelled or shell-less eggs. It is, of course, not contagious, but several cases may occur in a flock in which the laying of abnormal eggs is prevalent, and may continue to occur until the conditions that predispose to the abnormal shelling are corrected.

M. E. F. The post-mortem examination of the Ancona hen showed that the cause was a heavy infestation with worms, the intestines being literally packed with the parasites. She was also eaten alive with lice, and this would help to add to the general debility that the cadaver manifested. As there are not an excessive number to treat, I should advise the individual method as being more satisfactory than the flock. After a night of fasting give each bird three drops of oil of chenopodium, two drops of turpentine, one teaspoonful of castor oil, or, if the flock system of treatment is preferred, steep one pound of shag tobacco in sufficient water to cover it for two hours, then mix in a small mash for 100 birds, and feed after 12 hours' fast; some hours afterwards give a mash with 11 ounces of Epsom salts mixed in for 100 birds. Clear up and burn the litter and droppings, and disinfect the floors of the houses.

M. S. K. The post-mortem examination of the hen showed that the cause was peritonitis, due to the rupture of an egg tumour weighing 21 ounces. This completely filled the abdominal cavity, displacing the other organs from their normal positions. The cause was apparently an altogether abnormally sized egg (three inches in diameter), which had remained in the uterus, the succeeding yolks piling up in front of it to form the tumour.

SIXTH MIDLAND LAYING TEST.

Leading Pens in each Section, Eleventh Month, ended 6th September, 1925. (308 days.) (4 Birds per Pen.)

White Leghorns.—A. Pickard, Chilvers Coton, Nuneaton, 787 points; A. Snowden, Crosshills, Yorks., 767; W. Barron, Bartle, Lancs., 807.

White Wyandottes.—Misses Argles, Alton, Hants, 770 points; M. F. Phelan, Northam, Devon, 772; Fowler Bros., Earlswood, Birmingham, 751.

R.I. Reds.—K. A. Crawford, Dilham, Norwich, 715 points; L. A. Cooper, Footherley, nr. Lichfield, 726; Mrs. Athol Stuart, Boxmoor, Herts, 683.

Light Sussex.—F. R. Welch, Bewdley, 701 points; Col. A. Dugdale, Moreton-in-Marsh, 657; W. H. Brady, Penmaenmawr, 655.

A.O.V. Light Breed.—E. Thomas, Sartrouville (W. la Br.), 647 points; R. A. Fawssett, New Radnor (Bl. L.), 595; G. H. Rayner, Grantham (Bl. L.), 585

A.O.V. Heavy Breed.—H. W. Gee, Lickeys, Bromsgrove (Barne.), 638 points; J. Gordon Herbert, Newent, Glos. (Barne.), 545; F. R. Welch, Bewdley (Buff Rks.), 531.

(Continued at Foot of Column Next Page).

An Opportunity Offers.

If any of your readers chanced to be at Heathfield Station, in the County of Sussex, any day of the week, the chances are "odds on" that they would see a very large number of poultry crates, both full and empty, bearing unmistakable signs that their country of origin was the Irish Free State. In those that were full they would see some long-limbed, herring-gutted, but muscular representatives of the genus Aves looking for all the world like Marathon winners, rather than for the purpose for which they have really come, viz., a "rest cure" with "full board," so that they may ultimately figure in the London markets disguised under the trade term, "Fine Surrey capons."

And if you talk to the "Fatters" in the district, and ask them why they get these gaunt yellow-legged specimens, wholly unsuited to their purpose instead of good Sussex fowls, the reply is prompt and unanswerable, "We can't get a quarter of what we want of the breed we would like (Light Sussex), and have to import these to keep the men employed."

This is the fact, and it is due first and foremost to want of proper organisation within the industry with which I shall deal directly.

These Irish importations of live poultry are, however, but a drop in the ocean—I have, unfortunately, mislaid for the moment the Board of Trade statistics relating to the number of tons of dead poultry imported into the United Kingdom between January 1st and May 31st of this year, but, speaking from memory, it ran into hundreds of tons with a sterling value of over £1,000,000.

Over one million sterling in five months going out of this country, which could quite easily, and ought to be, kept in this country, for better birds.

In this matter we hold all the trump cards in our hand. From this district we have a special motor transport service, which conveys all table poultry t the London markets every night, picking up th "pads" by the roadside as they go along, delivers th birds early morning at the markets, and brings bac the empties on their return. And what is the cost o this service?—*One penny per bird, including return o "empties!"*

What would Russia, Bulgaria, Egypt, Denmark, aye and even China, give for such a service at such a cost —How they would flood our markets.

Now as to organisation. Let me say two things: (1 The ways of our grandfathers are not good enough fo us now. We live in different times, and have to mee an entirely different and increasing competition. (2 We must base our output on the same sound busines principles which obtain in any great business, such as for instance, the motor car industry, or in a smalle way the incubator business.

In these and similar businesses, with large and increasing outputs, each man has his own definite job and by concentration on that particular job and repetition, he naturally become very efficient, and his output increases correspondingly.

Now the table poultry industry is easily divisible int three parts or "jobs"—There is Part I.: The produce of day-old chicks of suitable kinds (the Light Sussex is generally preferred, but any white legged heavy breed would do.). Part II.: The rearer who raises these t 12 weeks old. Part III.: The "fatter" who gets them ready for the market. Part I. might be further subdivided perhaps into two, viz., the egg producer and the hatcher.

Surely an opportunity offers here for members of the S.P.B.A. to achieve this little bit of organisation and reap the profit that, as shown year by year, goes t foreign countries, less fortunately situated than we are in regards to the market.

Organisation forsooth! Merely a matter of member writing to Mr. Newman, and letting him know which part or "job" they are willing to undertake in th scheme, and he would put the component parts in touch.

A part which must not be lost sight of is that the demand for these day-old chicks for table rearing is much earlier than those for laying, also that eggs from your *mediocre* birds, *not the stars of your registere pens*, can be used for this purpose, the only essentia being that the parent stock shall be large-framed birds.

Don't let the foreigner beat you all the time, in spite of his disadvantages, but take your part in the work, and your share of the few millions which go yearly to him. No matter where you are you can send eggs or day-old chicks to the rearers in the Heathfield district.

As regards value of these eggs and day-old chicks fo the purpose in hand, I invite Mr. Newman or the readers of "Eggs" to give their opinion. All I wil say, in conclusion, is that "an opportunity offers' which you can take advantage of if you but registe your name with Mr. Newman, and indicate the par or "job" you will undertake.

"HEATHFIELD"

(Continued at Foot of Column Next Page).

Single Bird Section.—F. A. Ramm, Shackerstone, Nuneaton (Bl. L.), 212 points; F. Nicholls, Alvechurch, B'ham (W.W.), 200; J. Small, Edgbaston, B'ham (Bl. L.), 186.

Above we give total scores of the leading pens now competing in the Midland Laying Test. The eleventh month concluded on the 6th of September, and during this month a 50 per cent. egg yield was maintained throughout.

The highest total production per day during this period was 255 eggs and the lowest 200.

The size of the eggs produced are well above the average for the corresponding month of last year, and very few second-grade eggs are to be recorded.

Regarding the general health of the birds, this is excellent, there not being one single case of the usual colds, etc., which are prevalent this time of the year. The bodily condition of the birds is a well noted feature.

With the exception of one or two birds, moulting has not yet commenced, and the moulting birds are still in production.

During the month the following birds have passed through the broody coops: 142, 156, 164, 171, 223, 226, 237, 292, 293, 297, 305, 319, 323, 324, 303, 245, 300, 147, 468, 466, 467, 493, 374, 386, 121, 452, 476, 383, 351, 212, and 369.

There has been three deaths, the bodies of which have been sent to the Ministry of Agriculture for post-mortem, and they report as follows:—

No. 326. Rupture of heart wall. Blood clot in left ventricle.
No. 448. Egg yolk free in abdomen. Acute peritonitis
No. 342. Peritonitis.

Scientific Poultry Breeders' Association.

ll particulars of membership will be sent by return on plication to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

IMPORTANT NOTICE.

ie Annual General Meeting will be held on nesday, October 21st, at 4.30 in the afternoon isely.

.ECTION OF OFFICIALS.—Three members ie Council retire annually and are eligible for ection. The retiring members are:—Miss adison, Dane Hill, Sussex; Mr. P. Hedworth ikes, Pond Cottage, Virginia Water; Mr. J. H. den, Heydown, Heathfield, Sussex. All are ing themselves for re-election.

MINATIONS FOR THE COUNCIL should be ived by the Secretary not later than Wednesday, September 30th. Voting papers will ar in the issue of "EGGS," dated October and should be returned to the Secretary not than Wednesday, October 14th.

SOLUTIONS to be submitted to the General ing must be received by the Secretary not than Wednesday, September 30th.

TOM NEWMAN, Secretary,

llowing the business meeting, a dinner, at h Mrs. Hunter, President of the S.P.B.A., preside, will be held in the King's Hall, of the orn Restaurant. Reception at 6.30. Dinner p.m. Tickets will be 10/6 each, exclusive of s, but including all tips to waiters, head r, and wine waiter.

is earnestly requested that early application ade for tickets, as a heavy demand is exd, and accommodation is limited to about seats. Tickets will be posted on October It may be impossible to comply with cations received after that date. Until it is how many members wish to attend the r, it will not be possible to arrange for them ring guests. Application for tickets to be to

Mr. TOM NEWMAN, Rudgwick, Sussex.

lopes to be marked "Dinner."

eques or postal orders must accompany cations for tickets. All applications will be with strictly in rotation.

rning dress will be worn.

.P.B.A. ANNUAL GENERAL MEETING.

e following resolution has been received from F. J. Hemelryk:—

"That the annual subscription be increased rom 5s. to 10s. per annum, half of which be armarked as subscription to the National Poultry Council."

LAST WEEK.

I referred to a mash which was being widely sold in Warwickshire as "Tom Newman's," which was inferior in every way, and destitute of certain essential constituents. Messrs. Daffarn, of Erdington, have suggested that this WARNING notice might do them some harm. I regret that this did not occur to me at the time. The samples received in connection with the complaints were not theirs. Messrs. Daffarn have supplied many of our readers and members for some years, and their reputation is such that I do not think for a moment that any reader would think of them in connection with it. The samples submitted me by them have always been of excellent quality.

EXPERIMENTAL FARM.—WANTED.

Plans for the Experimental Farm are being completed. I am instructed by the committee to notify likely applicants that there will be a vacancy for a manageress. Someone very competent is needed, with practical experience, a capable hatcher and rearer, one, too, who thoroughly understands and appreciates the necessity of keeping the most careful records, and who will follow implicitly the instructions she receives. As announced in last week's issue, the Council's instructions are, that the farm is to be under my supervision. Applications should be made to me, and should be accompanied by full particulars as to previous experience, etc.

TOM NEWMAN,
Secretary S.P.B.A., Rudgwick.

KEIGHLEY AND DISTRICT BRANCH.

Mrs. Wilson asked me to remind members that the Whist Drive will be held at the Crotona Club, Keighley, on Saturday, October 3rd, commencing at 7.30 p.m. This is the first of a series of five which will be held in aid of the show funds. Substantial prizes will be given, and, in addition, a special prize of 20/- will be given to both lady and gentleman who score most points at the end of the period. The next monthly meeting will be held on October the 7th at the usual time and place. Mr. Percy Wainwright will give an address. His subject will be "True Utility."

AN OPPORTUNITY OFFERS.

(Continued from Page 214.)

P.S.—Though a seemingly trivial matter, an important point to be borne in mind where large numbers of day-old chicks are being sent weekly from the "hatcher" to the "rearer," the empty boxes must be tied together and returned without delay to the hatcher for the next consignment. This spells economy, which is all important.

EARLY MATURITY.

A member, writing from Fermanagh, says:—

"I have only White Wyandottes, and am aiming for *large* eggs, as well as good records, and I am very pleased with the improvement last year and this; but I do wish they would not mature so early. They all start laying when barely six months old. I cut *all fish meal* and *maize meal* out of your formula for growing birds. They are on free range, and still they started to lay early. However, the eggs are a good size, well shelled, and a beautiful dark colour, so I suppose it doesn't matter?

Most of the pullets weigh 5¼lbs. to 5½lbs., with very fine bone and texture, so I think they ought to do well.

I only started 'hens' three years ago, when we first came here, so I had much to learn, but when Mrs. Porter gave me my first copy of 'Eggs' I found exactly what I wanted, and it has been the greatest help to me ever since. I trap-nest all my birds, so by degrees I am building up a good strain.

It is most interesting noting the difference of hatchability of different hens. I have two hens (240 and 264 eggs in pullet year, never broody), and almost every egg from them was fertile, and produced a strong big chick, while other hens were most uncertain, and not worth setting."

As the body size of the birds is so well maintained, 5¼lbs. to 5½lbs. is a good weight for the Wyandotte pullet. I would not, if I were my correspondent, worry greatly on this question of early maturity. All that she should be careful about is the size of the hens she put into her breeding pen. If a big record tempts her to include one under-sized individual, that will be the first step down the hill. I am most particularly interested in the latter part of her letter, in which she remarks on the difference of hatchability of different hens. Attention was drawn to this some six or seven years ago in these columns, when the remarkable difference in the hatchability of the eggs of two full sisters with winter records of 60 and 64 respectively was quoted. In the one case the hatchability was nearly 100 per cent.; in the other barely 20 per cent. I am hoping that Miss Malcolm will contribute an article on this subject to the Annual Register. The question has been asked: "What constitutes a pedigree?" Is it not hopeless to talk of a pedigree as far as breeding is concerned, if no records of hatchability are kept? Of what avail is a 300-egg record if the hatchability is only 20 per cent.? It should be mentioned here that it has been demonstrated without leaving much room for doubt that the hatchability of the eggs of moderate producers shows just as much variation as that of the high producer.

A QUESTION ASKED.

The following is an extract from a letter which I received this morning:—

> "I should also be much obliged if you could inform me whether it is considered that roup is hereditary or the tendency to develop roup, or whether it is thought that birds which have
> covered from roup may safely be used
> breeders."

In answer to this I suppose that it is true to say
it is of every disease, that roup is not actually h
ditary, but that there may be a tendency on the
of the progeny of birds which have suffered from
disease to develop roup. For my own part I w
not breed from any bird which has suffered fro
serious attack of roup. We really have to b
only from the fittest if we are to maintain the stan
of our flocks. And a bird which has recovered fro
bad attack of roup, although to all intents and
poses it may be perfectly healthy and vigorous,
also be affected in some manner which we are un
to detect by eye or ear. Therefore, in answer to
question, I say that it is not safe to breed from b
which have recovered from the disease.

THE WADHURST BRANCH.

This branch will hold its fifth annual show
"The Hut," Best Beech Hill, on Wednes
September 30th. Amongst the special prizes
the challenge cup for the best hen or pullet,
silver spoons presented by Mr. Luff, Mr. Pritc
and per Dr. Rosedale. The Heathfield and
trict P.K. Association also give bags of la
meal; Miss Hollies gives bags of corn for
egg classes.

A Laying Trial, commencing on October 1
will be held on Messrs. Luff and Bennett's po
farm, open to members of the branch. Each m
ber can send two birds, provided a specime
the breed was exhibited at the branch show.
encourage the breeding of table birds in the
trict, it has been decided to give a 5 per c
bonus in points on all first grade eggs laid
white-fleshed birds. Second grade eggs will
crease in point value as the season advances.

Dr. Rosedale has been elected President of
branch. Chairman, Miss Hollies. Commit
Mrs. Tudor, Mr. A. E. Gallup, Mr. F. Gallup,
Luff. Secretary, Mr. J. Everard.

STOCK COCKERELS.

I have received the following letter from Me
Tilley and Webb, which may be of interes
many of our readers who have fighting cockerel

> "This may prove a valuable hint to
> farmers who rear each year numbers of
> able stock cockerels. It is impossible ot co
> to rear each bird separately, consequ
> numbers go to the wall through the ot
> getting them down. We rear in batche
> twenty to thirty, and generally lose fiv
> six from each lot with vigorous cockerels,
> it is not always the case of the surviv
> the fittest, as, for instance, when two of
> bosses of the batch fight for the mastery,
> goes under and all the rest then finish
> off. There is no chivalry amongst cocke

Valuable pedigree birds are therefore lost, and we have in the past lost pounds each year through this cause, being content, like others, to let them fight if they wish to until, by accident, we discovered the following simple method and we have lost nothing since. As soon as we see a cockerel that has had the worst of a fight, and consequently the others are worrying, chasing him around, etc., we remove him to another house. We get three or four a week very often. We then feed them up for a few days and then put them all back together, at night time, into one of the pens from which they originally came and keep that pen of birds all shut in together for the next day, letting them out on the following day, when they will have forgotten their grievances. It is not only the loss financially, but valuable birds cannot be replaced, therefore we have been obliged to carry many more cockerels than we required, although we have had orders and had to turn them down."

ORKSHIRE FEDERATION LAYING TEST.

understand that there is still time to enter pens he above test, also that the National is not yet up, and there are still a few openings in the ttish Test. Time, however, is short, and test nagers become testy when applications come in howers at the last moment, but there is always neone running for a train.

S.P.B.A. DINNER.

very effort is being made by the Committee rusted with arrangements for the first S.P.B.A. ner, to ensure its being a social success. here will be a very short toast list, and those nding to be present need not fear that they will bored by having to listen to speeches of unnted length, which sometimes tend to mar the oyment of similar functions.

is intended to provide a musical programme nliven the proceedings, and members will have ny opportunities of meeting and conversing with r friends.

lready, although the decision to have a dinner year has only just been announced, there has n a quick demand for tickets, and members ning to attend should lose no time in making lication, or they may be disapponted.

J. E. K.

THE 1926 S.P.B.A. REGISTER.

'e are now busily preparing the 1926 Register, hope to make it at least as good as those that preceded it. We have already received nises of some articles from the pens of experts h will prove most useful and interesting to our members. We shall be glad to consider any articles of permanent interest from our members, those dealing with personal experiment will be most acceptable. The forms for the Registration of Pens are now ready, and will be sent on application. We would ask our members who wish to register their pens to read most carefully the full instructions sent out with the forms, and to note that only pens which exactly conform to the rules can be accepted. If this is carried out, much time and annoyance will be saved. Each year the Editor has to send back a number of forms which are incorrectly filled in, or which do not comply with the rules, and this causes delay and oftentimes disappointment. The forms when filled in should be sent to the Editor as soon as possible, and **in no case** can Registration Forms be accepted **later than October 16th.** All applications for Registration Forms should be sent to Rev. H. Mudie-Draper, 25, The Chase, Clapham Common, S.W. 4.

LANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES.

Minutes of the Quarterly Meeting held at the Victoria and Station Hotel, Preston, on Saturday, September 19th, 1925.

The Chairman in his opening remarks conveyed the sad news of the death of Mr. Frank Toulmin, a former joint secretary and treasurer of the Federation. Mr. Barron then gave a brief outline of the work Mr. Toulmin had performed on behalf of the Federation in its initial stages. The Secretary was requested to send a letter of condolence to his family.

Minutes.—The minutes of the last Quarterly Meeting, held in Preston, on June 20th, 1925, were read, and, on the proposition of Mr. E. Evans, seconded by Mr. J. Wrennall, these were confirmed and signed.

Correspondence.—The Secretary read a letter he had received from the Ashton-under-Lyne Society respecting the Federation draw, saying ticket No. 12856 had not been sold by them as published on the winning list. We find this was an error, as the ticket was sold by the Rochdale Society. The counterfoil did not bear any name or address, therefore we have not been able to forward the prize to the winner.

A letter was read from a competitor at the last Federation Show, saying he had not received a special prize (Silver Medal) awarded at the Show. Mr. Hamnett stated the matter was now being dealt with by the donor.

Ribbons for Laying Test and Members' Shows.—A supply of ribbons have now been obtained, and secretaries of affiliated societies may have a ribbon for the best bird in their show on application to the Federation Secretary.

Delegates to National Poultry Council Meeting at London, October 23rd.—The following were requested to attend:—Messrs. W. Hamnett, A. T. Walker, Dr. J. E. Helm, and the Secretary.

Federations Recommended Egg Prices.—The Secretary submitted a list of prices for the last twelve months, showing a comparison with the Daily Post Prices. Mr. J. Ashworth moved, and Mr. F. Thompson seconded, that a copy be sent to the Poulton Society, who had been enquiring about same.

Accounts.—The accounts submitted for delegates' expenses to the N.P.P. Meeting was passed for payment on the proposition of Mr. J. Wrennall, seconded by Mr. G. E. Leigh.

Affiliation Fees.—A few societies have not yet paid their fees for the current year. A request was made that these societies give same their immediate attention, as the financial year ends in October.

Sub-Committees' Report (Laying Test).—The Secretary stated that sufficient entries had not yet been received, and a request was made to the delegates to make an effort to obtain the required number. **(Show).**—Mr. Marson reported on behalf of this Committee, stating schedules would be out early in

October, and he was looking forward to a successful show. Anyone wishing to have an advertisement in the Schedule or Catalogue must apply to the Show Secretary, Mr. F. Ashworth, The Clough, Halliwell, Bolton, who will also send Schedules to anyone on request.

Educational and Propaganda.—Mr. T. Edmundson reported on behalf of this Committee, and suggested a supply of posters might be obtained through the National Poultry Council, and sent to societies for distribution to shopkeepers and grocers in every district, advertising "Eat More New Laid Eggs." He thought this would be a cheap way to get the advertising scheme going. The delegates to the N.P.C. were requested to bring the matter forward at the next meeting of the N.P.C.

Judges' List.—Mr. J. Sutton suggested a fee of 5/- might be charged to anyone applying to have their name on the panel, this to come in force when the new list is compiled, next January. On the proposition of Mr. G. B. Tootall, seconded by Mr. A. Hallows, it was decided to refer the matter to the Educational Committee for consideration. This Committee was also requested to consider the best way of dealing with judges' applications for the new panel. Dr. J. E. Helm outlined a scheme that might be taken up by the National Poultry Council, for keeping a register of "Record of Production" at our Registered Laying Tests. The Secretary was instructed to write to Mr. Brown, the National Poultry Council Secretary, asking him to place the matter on the agenda for the next meeting of the Council, on the proposition of Mr. E. Evans, seconded by Mr. G. E. Leigh.

The pooling of delegates' railway fares came out at 3/4 per head. This closed the business, and the meeting terminated.

E. COLLIER, Organising Secretary.

WESSEX UTILITY POULTRY BREEDERS' ASSOCIATION.

The Fourth Annual Show was held in the Market Hall, Wimborne, by kind permission of Messrs. T. Ensor and Son, and was one of the best managed fixtures we have attended. The organisation of Miss Parry Okeden (hon. Sec.) and Mrs. Langer (assistant hon. sec.) left nothing to be desired, and they had the assistance of an excellent band of stewards, prominent amongst whom was Mr. Hoare.

Awards.—Special Best Bird in Show, Capt. Whitley. Best Light Breed, cockerel, Capt. Whitley; pullet, Miss Holbrook. Best Heavy Breed, cockerel, Mrs. Flower; pullet, Capt. Whitley. Best Duck or Drake, Mr. Cave. Best Breeding Pen, Capt. Whitley. Second Best Breeding Pen, Mrs. Ellis.

Utility Leghorn cockerels, Mr. Leschallas, Miss Digby; pullets, Miss Holbrook, Mrs. Pitt-Rivers. Utility Wyandotte cockerels, Mrs. Ellis; pullets, Misses Lawes, Mrs. Trehane. Utility Rhode cockerels, Mrs. Lawes, Mrs. Langer; pullets, Miss Digby, Misses Lawes. Utility Light Sussex cockerels, Capt. Whitley, Mrs. Ellis; pullets, Capt. Whitley, Mr. Flinders Caine. Utility A.O.V. Light cockerel, Capt. Whitley, Mrs. Langer; pullets, Mrs. Parke, Capt. Whitley, Heavy cockerel, Mrs. Flower, Major Chawner; pullets, Mr. Lonnen. Drake, Mr. Cave, Col. Homer. Duck, Col. Homer, Mrs. Smith. Utility Pigeon cock, Miss Mount-Batten, Mr. Willis; hen, Miss Mount-Batten. Breeding Pen, heavy breed, Mrs. Ellis, Col. Homer; light breed, Capt. Whitley, Miss Holbrook. Exhibition Light cockerel, Capt. Whitley, Mrs. Parke; hen, Mrs. Parke, Mrs. Langer; Heavy cockerel, Capt. Whitley, Mrs. Flower; hen, Mrs. Smith, Mrs. Eden. Bantam cock, Mr. Hoare, Capt. Whitley; Bantam hen, Capt. Whitley, Mr. Hoare.

Judges: Messrs. Blakesley and Blyth.

LAINDON LAYING TEST.

FINAL RESULT OF THE 48 WEEK TEST.

Section 1.—Light Breeds (5 pullets).—1, F. Freeborn (W.L.), 1025 eggs; 2, H. H. Thomson (W.L.), 960; 3, H. Maycock (Blk. L.), 893. Last period certificate, F. Freeborn.

Section 2.—Heavy Breeds (5 pullets).—1, E. V. Bazin (R.I.R.), 811 eggs; 2, L. J. Willis (R.I.R.), 795; 3, W. Belsham (R.I.R.), 779. Last period certificate, L. J. Willis.

Section 3.—Single Bird (Light Breed).—1, W. Dillenz (W.L.), 234 eggs; 2, Miss N. Grubbe (W.L.), 228; 3, E. Anglian P.F. (W.L.), 217. Last period certificate, W. Burge.

(Continued at Foot of Next Column).

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

APPLICATIONS FOR MEMBERSHIP.

Hudson, Alec, Town End Place, Glusburn, Nr. Keighley.
Kaye, Mrs. E., Ivy Bank, Pool, Nr. Leeds.
Dearnley, Ernest, 34, Fell Lane, Keighley.
Dearnley, J., 34, Fell Lane, Keighley.
Corner, Mrs. H., Woodlands Park, Great Missenden, Bucks.
Hopwood, Miss M., c/o Rev. Homer Page, The Rectory, Woolpit, Suffo
Naylor, W. H., Lower Brea, Shibden, Halifax.
Withycombe, Miss B. L., "Manywells," Knowle, Braunton, N. Dev
Tomlinson, E., The Bungalow P.F., Clifton, Nr. Preston.
Parsons, Miss M. C., Chosley House, North Warnboro, Odihan
Fisher, F., Somersham, St. Ives, Huntingdonshire.
Howard, H., Moss House, Cliburn, Nr. Penrith.
Hall, Mrs. W., Otterhill, Rowtown, Chertsey, Surrey.
Humphries, Miss M., North Brook, Godalming, Surrey.
Webb, W. E., Portocks End Farm, Guarlford, Malvern.
Preece, J. R., Merevale Farm, Henley Castle, Worcs.
Pritchett, J. H., Broomwood, Thorpe Arnold, Melton Mowbr
Feaviour, Miss K., Highfield P.F., Baunton, Cirencester.
Standen, A. E., 94, Crawley Road, Horsham, Sussex.
Wills, A. W., Garden View Cottage, Oakley, Hants.
Miller, Mrs. E., Biggar Park, Biggar, Lanarkshire.
Tostevin, Mrs. R. J., 5, Don Road, Jersey, C.I.
Abram, H., Chain House Lane, Whitestake, Nr. Preston.
Goddard, A. W., Station Square, Flitwick, Bedford.
Smith, E., Runge Farm, Shaw, Lancs.
Walker, R., Crowbank Farm, Castlecary, By Bonnybridge.
Vickers, G., 20, Villiers St., Ashton-under-Lyne, Lancs.
Clarke, Ian A., Moorcot, Beacon Rd., Crowborough, Sussex.
Bichard, F. W., Baubigny Pedigree Utility P.F., St. Sampson Guerns
Spark, W., Thatched Cottage, Chuck Hatch, Hartfield, Susse
Frog Hall P.F., Frog Hall, Wokingham, Berks.
Farrant, S., Ballakillingham, Nr. Ramsey, I.O. Man.
Beesley, John, 169, Main St., Billings, Wigan, Lancs.
Bentley, A. James, Brockleys, Newmanleys Mill, Eastwood, No
Murray, Wm., Ringwood, Allan St., Motherwell.
Caldicott, A. O., Lovelace Avenue, Solihull, Warwickshire.
Billinghurst, H., Essenden, Burnham-on-Crouch, Essex.
Seal, E. C., 87, Mollais Rd., Woolston, Southampton.
Inglis, Miss M. A., 113, High St., Kirkcaldy, Scotland.
Young, Miss N. L., "Berryhill," Fowlis Easter, Nr. Dunde
Hathway, Miss M., The Cottage, Bicknoller, Taunton.
Fothergill, A., 43, Park Square, Ossett.
Rodgers, F., The Farm, High St., Brimington, Nr. Chesterfi
Robeson, Mrs., The Abbey Cottage, Tewkesbury.
Orchards, Mrs. A. E., Tidcombe Farm, Tiverton, Devon.
Smith, E. H., 120, New Bolsover, Nr. Chesterfield.
Berry, W., Shaws P.F., Tockholes, Nr. Darwen, Lancs.
Lloyd, W. E., The Waterworks, Ware, Herts.
Hall Bros., Nordham, North Cave, E. Yorks.
Rothwell, W., 287, Edenfield Rd., Rochdale, Lancs.
Wagstaff, Mr., Scholes, Thongsbridge, Nr. Huddersfield.
Sutcliffe, Walter, New Rd., Holywell Green, Nr. Halifax.
Montgomery, R. Y., 217, Langlands Rd., Govan, Glasgow.
Sykes, N., "Howcans," Ambler Thorn, Halifax.
Purser, L. R., 25, Barley Hall, St. Heywood, Lancs.
Butterworth, Walter, 61, Boarshaw Rd., Middleton, Lancs.
Walker, Robert, Livesey Fold Farm, Withnell, Nr. Chorley, La
Deaton, K. J., The Bank Restaurant, Wickford, Essex.
Davies, R., 53, Mulgrave St., Swinton, Manchester.
Saunders, Miss B., Bay Tree Cottage, Compton, Guildford.
Goulbourn, Dr., 31, Fernhurst St., Ewood, Blackburn, Lancs.
Manger, H. E., Ecault, Worsley Bridge Rd., Beckenham, Ken
Linfoot, Denis, Carlton House, Carlton-in-Cleveland.
Miglioretti, James, Gt. Fransham P.F., Great Fransham, Dereham, Norf
Field, Miss N., S. Benets, Callow End, Worcester.
Cooper and Cooper, The Bungalow, Walpole St. Peter.
Atkinson, J., Tower Farm, Woodhall Spa, Lincs.

Section 4.—Single Bird (Heavy Breed).—1, H. Bush (W. 225 eggs; 2, H. Jones (R.I.R.), 211; 3, F. Freeborn, 201. period certificate, J. H. Hamilton.

Section 5.—Gift (Any Breed).—1, W. Dillenz (W.L.), 241 e 2, E. V. Bazin (W.L.), 198; 3, H. Maycock (W.W.), 191.

Silver Cup Winners.—Section 1, F. Freeborn; Section 2, E Bazin; Section 3, W. Dillenz: Section 4, H. Bush, Junr.

Silver Medal Winners.—Section 1, H. J. Thomson; Sectio L. J. Willis: Section 3, Miss N. Grubbe; Section 4, H. Jo Section 5, W. Dillenz.

Winner of Mr. Watkin's Special 60-egg Incubator.—W. Dill

Winner of Mr. H. Maycock's Special 9 cwt. Wheat.—I heat between Miss N. Grubbe, £1 16s. 11¾d., and H. Bush, Ju £1 16s. 11¾d. Will receive 4½ cwt. each.

Last Period First-Class Certificate.—L. J. Willis (R.I.R.)

Table Poultry Production.

A Lecture delivered at the Midland College Conference

By JOHN H. DOWDEN.

May I, before getting down to the practical pro- ses of the production of table poultry, generalise a few moments on matters respecting this side our industry?

To a very large number of poultry-keepers, as ewise to the general public, when poultry farm- is mentioned, a picture of a quantity of eggs pears before them, but eggs are not all if we to make the most out of our business.

Some members of my audience, no doubt, will nk "it is all very well this man coming up from ssex, advising us to produce table poultry, but at applies to Sussex does not and cannot apply other parts of the country." I want to prove you, amongst other things, that this is not so. ere is no reason why the Sussex table poultry lustry cannot be extended on a very large scale other parts of the country. It is also said that ces obtained from Sussex are higher than prices ained from other parts for the same article. is is also a delusion. It matters not whether live in Timbuctoo, Sussex, China or Leicester- re, quality will tell. The London salesman takes heed of your address when he gets a good con- nment of produce. He is not the dishonest son that he is so often pictured, and wherever finds that he can cultivate a colony or a single signer of good quality produce, he, like a good siness man, is going to see that he retains you one of his sources of supply.

There are many reasons why this side of the lustry should be taken up on a very much larger le than at present, and I will enumerate a few the reasons.

The value of our imports of dead poultry is many lions of pounds annually. From a national ndpoint alone, therefore, it will be seen how im- rtant it is that the powers that be, and also our ching institutions, should do all that is possible encourage the development of this side of the ultry industry. It is very much against the shes of the dealer to have to handle inferior eign produce, for, as with eggs, there is no ntry in the world that can, or does, produce h excellent table poultry and eggs as England. is probable that the demand for home produce rdly knows a limit. Only last week I had an portunity of inspecting a very large quantity of classes of eggs, and it may be a relief to some o attended the Harrogate Conference to be sured that the British farmers are not the only es who produce poor eggs! There need be no r, therefore, of not finding a ready market if first-class article is produced. The market is dy and waiting.

The capital expenditure for the installation of a fattening plant is infinitely less than that necessary for any of the other branches of the poultry business. In addition to this, there is no other branch that offers such a quick return upon capital expenditure. Especially is this the case where running chicks are bought in simply for fattening, as against where the chicken are actually hatched and reared. In the latter case the returns upon capital are naturally somewhat longer delayed. For the above reasons this branch is ideal for the man who has to make a start in a very small way. Another great advantage is the technicalities of fattening table poultry can be mastered in much less time than can pedigree breeding or commercial egg farming. Also, far less land is needed, which makes it possible to have your establishment quite near a centre consumption.

Had I an audience of general farmers here to-day, I should most assuredly claim that the poultry branch of agriculture was by far the most profitable of any, but since my audience consists of poultry farmers, who, unfortunately, in many cases, have a tendency to deprecate their own business, they would not realise the truth of my statement so much as would the general farmer who has a well-run poultry branch of his business. Being a general farmer myself, as well as a specialist breeder, I am in a position to realise this fact. I have ploughed land, a flock of Southdown sheep, I raise bullocks, and keep milch cows, and I know which pays me best. Just as much care is bestowed upon the other branches of my farm as is bestowed on the 8,000 head of poultry, which are kept at "Heydown," and my considered opinion is that the other branches, as far as profits are concerned, do not compare with poultry.

The prospects of poultry farming generally, despite dogmatic assertions to the contrary, are as bright, if not brighter, than they have ever been. It must, however, be borne in mind that whichever branch of the industry is taken up, it is no use turning out a C3 article. Whether it be table eggs, table poultry, or pedigree stock, the owner must go all out for A1 quality. There is a superabundance of second and third grade table poultry and eggs on the market, and if any of my audience ever have an opportunity of visiting the London markets they will learn very much in a few minutes of the difference in demand for a really good consignment of birds to the passing glance which is given to the second quality article. It is absurd to say that the public have not enough money to purchase table poultry. It is purchased in great bulk, and, in the case of the foreign article, at exorbitant cost, when it is realised how inferior is the article, and how much greater the proportion of waste than with the home product. It should be realised that the consumption of table poultry can be very greatly increased, and propaganda by advertisement and other means is necessary in this connection. Only think for one moment of the growth of the motor car industry, in order to realise that whenever even a luxury is sufficiently advertised money will be found to purchase it.

It is not only to the man who proposes to specialise in table poultry production that this should have a special appeal. In my opinion, every poultry farm should have its fattening plant installed, to which all birds which show the slightest blemish or deformity can be relegated, together with culls from the laying houses. All these birds, if properly fattened and finished, can be made to show a substantial profit, instead of the loss which invariably occurs, when they are thrown on the market in haphazard condition. The market being flooded with this class of article, the person who adds to this flood is bound to receive the returns that he deserves.

In the same way also the commercial egg farmer can turn to profit his surplus White Leghorn cockerels, and thus solve one of his most pressing problems. These cockerels, if separated from the pullets at an early age, and suitably fed, fetch very high prices if marketed early.

The farmer who already has a large incubation and rearing plant installed, which is only in use for a very few months each year, can by the hatching of early table chicken open up for himself a new and lucrative field. Supposing that he keeps two or more heavy breeds, it is possible by using the cockerels of one breed with the hens of the other, to produce first crosses which make quite good table birds, and this without incurring the extra expense of special breeding stock.

The fattening plant on a pedigree or commercial farm has the additional advantage that it is operating at a time when revenue from other sources is low. This is comparable to the system of rotating crops, and thus it is possible to make every season of the year profitable.

Having outlined the generalities regarding table poultry, and given the reasons for the faith that is within me, I will now proceed to deal with the practical aspects of fattening.

Taking these in their order, I will commence with the BREEDING STOCK. The best varieties for this purpose are the Sussex family. Light, Red, and Brown. These may, if desired, be crossed with Indian Game, Old English Game, or Dorking. In either case some of the best table chicken will be produced.

Having secured your breeding stock the next item is the INCUBATION of the eggs. My advice is not to fiddle with the broody hen, but to go in for an incubator, a good large one, and one to which it is possible to add three or four sections each season. Think imperially, and produce on a large scale. Having mastered the practical side, go out for numbers. Your returns will be better. You need have no fear as to the financial result, providing, as I have already emphasised, that you have mastered the practical side.

Commence to hatch your chicks as soon after the 1st of November as possible. I strongly advocate the use of a portable brooder house, with a paraffin hover. The idea of hatching so early in the season may alarm some of you here, being the opinion that chicks hatched at this time year are difficult to rear. Personally we have n experienced any difficulty, and would far rath hatch and rear chicken in November and Decemb than in May and June. This can quite justifiab be attributed very largely to the fact that breeding stock at "Heydown" has been bloo tested, and carriers of B.W.D. removed. This w be found to result in very much better hatchabili and rearability.

(To be Continued.)

"LEICESTER MERCURY" COUNTY LAYING TRIALS.

Officially Supervised by the Leicestershire County Council-
Agricultural Education (Joint) Committee.
HORTICULTURAL SUB-COMMITTEE.

Final Report, Leading Pen Positions, Awards, Breed Averages, e

REPORT

The Second Twelve Months' (48 weeks) Laying Trials, held the farm of Mr. W. Rolling, "Cragmere," Broughton Astley, ca to an end on September 6th. 1925. The number of birds co peting was less than in the preceding trials—112 birds as co pared with 240—but in nearly all cases the birds sent were in more forward condition than at the commencement of the p vious test. From an egg-producing point of view the trials ha been eminently successful, and again show what highly p ductive stock is kept in the county. The average egg product is somewhat higher than in the first trials, 188.7 eggs per bird against 184 7 eggs, and there is also a gratifying increase in number of first-grade eggs with a corresponding decrease second and third-grade eggs. In some cases the number of sec and third grade eggs has been excessive, and this only tends show how necessary it is to exercise great care in the select of the breeding stock if eggs of good size are to be obtained. the other hand, some pens have produced an exceptionally la number of first-grade eggs, and a number of birds of a hig productive character have laid all first-grade eggs, or, at mo not more than two second-grade eggs.

During the 48 weeks the 112 birds competing have produ 21,136 eggs, 84.4 per cent. of which have been first-grade and o 0.48 per cent. under weight. During the final month of the tri the egg production fell off to some extent, but this is accounted by broodiness on the part of some birds, and by falling i moult of others The importance of a good start in a lay test is clearly shown in these trials for those pens of birds th put up a good winter record, and that also produced good-si eggs, soon gained a commanding lead which could not be ov taken by those pens that laid freely during the later stages the trials. The White Leghorns competing upheld the reputat of the breed for size of egg, 90.77 per cent. being first-grade, be closely followed by the Rhode Island Reds with 86.29 per ce first-grade eggs. White Wyandottes produced 77.12 per cent. fi grade eggs, and Black Leghorns only 67.35 per cent., a somew disappointing figure for a breed that is considered by many equal to the White Leghorn The White Leghorns produced e excellent average of 195 eggs per bird,; the Rhode Island R 193.7 eggs per bird; and the White Wyandottes, 180.5 eggs per b The two Anconas competing averaged 233.5 eggs per bird.

A very satisfactory feature of this and the preceding t has been the freedom from infectious disease, for no case this nature has occurred in either year. Such freedom fr disease reflects great credit on the management, and shows great care that Mr Rolling has taken with the birds whilst un his management.

During the period of the trials six birds in all have died

Of the 112 birds competing, 48 laid 200 eggs or over, and the laid over 250 eggs each, whilst only four laid less than 100 e each in the 48 weeks.

Position of Leading Pens at Close of Trials.

Section 1. Division A. Light Breeds (Six Birds).—Mrs. Crawford (W.L.) 1280 eggs; Crawford and Dowell (W.L.), 1073; and A. Moore (Bl. L.). 928; Alan Kemp (Bl L.), 867.

Section 1. Division B, Heavy Breeds (Six Birds).—T. F. W man (R.I.R.), 1411 eggs; Mrs E. Ball (R.I.R.), 1252; Crawford Dowell (R.I R.), 1309; Lady Dorothy Fraser (R.I.R.), 1260; C. Payne (R.I.R.), 1211.

Section 2. Any Breed (Two Birds).—J. T Kidger (W.W.), eggs; Geo. Gilliver (W.W.), 433; Geo. Stevens (An.), 467.

AWARDS:—CHALLENGE CUPS

The "Cragmere" 20 Guineas Challenge Cup (to be held for year). For the pen of six birds producing the highest value eggs.—Pen 15: Mr. T. F. Wildman, Newbold Verdon, Leices Pen of six Rhode Island Reds, 1411 eggs. Value, £11 19s. 4

The "Pratt" Challenge Cup (to be held for one year). the pen of birds in Section 2 producing the highest value of e —Pen 22: Mr. J. T. Kidger, Copt Oak Lodge, Markfield, Leices Pen of Two White Wyandottes, 449 eggs. Value, £3 17s. 11d.

(Continued at Foot of Column Next Page).

The Poultry Farmer & his
Appliances for Rearing Chicks.

By **MAJOR C. HESKETH.**

Few things are more difficult for the Poultry Farmer
n rearing chicks, and while everybody would agree
the eminence of Biddy for the job, she is not, as a
e, adequate to the Poultry Farmer's needs, and he
compelled to resort to artificial processes.

Unfortunately very little study appears to have been
en to the discovering of the principles upon which
lady works, so that the appliances designed to do
work bear little or no resemblance when in opera-
n to the Brooding Hen.

What would be said if a bridge were built that would
ry only an insignificant proportion of the load for
ich it is designed? Why, "waste, of course," and
the adjuncts at the disposal of the poultry farmer
not achieve more than the inferior bridge. This
s a heavy handicap upon the chances of success,
l even when achieved it is not only what it might
l ought to have been, but is accompanied with
vy loss of life, labour and pain.

No wonder people ask, "Can poultry pay?"

f, then, the outlook is to be improved as regards
ring, labour reduced, and waste cut to a minimum,
at is to be done? Obviously make your appliances
that they operate on the same principles as Biddy.

First we must discover how she functions; the
sting appliances must be reviewed to see how far
y embody nature's processes, and if they fail, then
v designs must be got out. Now, wherein lies the
rets of the brooding hen?

First, she supplies a certain amount of warmth, the
cks themselves contributing a share to make up the
al warmth of the family; then she *maintains* by
uction a perfect system of ventilation drawn up-
rds, and escaping through her feathers, the air
ng moist; and finally she protects from lateral or
und draughts.

f this analysis is correct, the processes appear
ple, and the question is to what extent do existing
liances answer to the analysis.

he usual types may be group as:—

(a) Conical metal hovers.

(b) Wooden boxes with heat reflectors.

The (a) appliances may be metal, an anthracite
ve, or a lamp with light exposed or unexposed,
ced centrally, or on the rim; or by hot water in a
iator, and inside the hover may be a metal cell for
ding hot air. Any of them may be stood on a wood
or, or concrete, or earth, and raised a few inches
ve ground level on a solid floor or even a grid. In
the edge of hover is parallel to and a few inches
ve floor level.

he boxes (b) are heated by a lamp, the heat reflec-
being overhead, air coming in through holes in
ners or by the sides of the lamp in its pit.

Examining these, how far do they supply the quali-
exhibited by Biddy? In both (a) and (b) there is little warmth, but may be much heat depending upon:—

(1) The working of the lamp.

(2) The vagaries of anthracite

(3) The metal hover.

Lamps are usually inferior, and wanting in steady power, though superior in this respect to the anthracite, which is at one time of torrid intensity, at another so tame that the hover is chilly, and as to the metal hover, could anything be less suitable? Its conductivity and consequent inferior powers of heat retention make it the very antithesis of Biddy. It fails by its own inherent qualities, and one wonders how it ever came into use. Such heat as it retains is as dry and unkindly as the metal from the metal funnels of the steamship, whose comfort is sought in moments of anguish at sea, only to augment our discomfort. Heat escapes through ventilating holes, which are generally inadequate, otherwise the heat would be insufficient.

With the hot water radiator the heat would certainly be less harsh, but its useful qualities are deteriorated by the metal hover.

In all these adjuncts the method of supplying heat is very inferior, and its qualities very poor compared with the warmth of Biddy.

VENTILATION AND PRODUCTION.—The heat from the metal hover or reflector naturally induces entrance of fresh air. In the hover type this enters all round, and there is not, and cannot be, an efficient protection against draughts, though there is an idea that if the hover is raised above ground level or screened by a curtain or a fender, that the draughts are prevented. Obviously this cannot be, for the fundamentals of the design are opposed to the exclusion of draughts.

The "En-Tout-Cas" Challenge Cup (to be held for one year). To the owner of the individual bird producing the greatest number of eggs.—Pen 22: Mr. J. T. Kidger, Copt Oak Lodge Markfield Leicester, White Wyandotte, 282 eggs.

MEDALS.

Section 1. Division A. Light Breeds (Six Birds).—Gold Medal: Mrs. R. Crawford, Highfield, Lowesby, Leicester, Pen 2, White Leghorns, 1280 eggs. Silver Medal: Messrs. Crawford and Dowell, Hungarton, Leicester. Pen 1, White Leghorns, 1073 eggs. Bronze Medal: Messrs. J and A. Moore. Walton-by-Kimcote, Lutterworth Pen 4. Black Leghorns, 928 eggs.

Section 1. Division B. Heavy Breeds (Six Birds).—Gold Medal: Mr. T. F. Wildman, Newbold Verdon, Leicester Pen 15, Rhode Island Reds, 1411 eggs. Silver Medal: Mrs. E. Ball, Great Claybrook, near Rugby, Pen 9, Rhode Island Reds, 1252 eggs. Bronze Medal: Messrs. Crawford and Dowell, Hungarton, Leicester, Pen 7, Rhode Island Reds. 1309 eggs.

Section 2. Any Breed (Two Birds).—Silver Medal: Mr. J T. Kidger, Copt Oak Lodge, Markfield, Pen 22, White Wyandottes, 449 eggs. Bronze Medal: Mr. Geo. Gilliver, Newbold Verdun, Leicester, Pen 21, White Wyandottes, 433 eggs.

BREED AVERAGES.

Breed.	No. of Birds.	Eggs Laid. Grade. A.	B.	C.	Average per bird.
Rhode I- Reds	74	12371	1949	17	193.7
W. Leghorns	14	2480	248	4	195.0
Black Leghorns	12	1209	524	62	149.5
W. Wyandottes	10	1392	394	19	180.5
Anconas	2	386	81	0	233.5
Total (all breeds)	112	17838	3196	102	188 7

Highest Pen Rcord (Six Birds): Rhode Island Reds, 1411 eggs.
Lowest Pen Record (Six Birds): Black Leghorns, 867 eggs.
Highest Individual Record: White Wyandotte, 282 eggs.
Lowest Indiivdual Record: White Wyandotte, 65 eggs.
Average value of eggs laid per bird: £1 11s. 4¾d.
Highest price per dozen (pen of six birds): 2s. 2.33d
Lowest price per dozen (pen of six birds: 1s. 7,94d.

H. T. ATKINSON,
6, St. Martin's, Leicester.

September 16th, 1925

The box is little better, air entrance being uncontrolled, the port hole having to be always open to prevent asphyxiation. Ventilation then is by uncontrolled draughts, so where does the air go? It passes by the chicks, carrying with it the fumes from the droppings and exhalations of the birds against the metal reflector, where it is warmed and thrown back upon the birds. Were it to pass through the ventilators, there would be little or no heat available for the birds, but by limiting the ventilation the heat is locked up inside the hover, and the wretched chicks are forced to breathe a devitalized and vitiated hot air, while their abdomens and hind quarters are exposed to the incoming cold air, and they may be seen struggling to reach the heat, and to get away from the unavoidable draughts This we do not see with the hen, a sure sign that the air available bears no resemblance to that supplied by Biddy. The struggles frequently result in death, and when the "hover" is square, the mangled remains of the chick are found crushed in the corners.

HYGIENE.—In all cases inferior because of the difficulty of seeing the birds and the inaccessibility of the interior making cleaning troublesome and inconvenient. There is usually a fetid air arising, a sure sign not only of bad hygiene, but also defective ventilation.

Such, then, are the adjuncts available. They are defective in warmth-giving qualities, in ventilation and hygiene, and the loss of life spread over the whole industry is colossal, wasteful and cruel to the birds. A moment's reflection will show that these adjuncts are very poor imitations of the hen.

The remedy is a Brooder, and not a Hover, which should be round to prevent squashing in the corners and wherein fresh air is induced through a defined and moist medium by the heat in the brooder, and passes by the birds and through the top. No metal hover or reflector should be used, so that there can be no air-lock of poisoned air hovering over the chicks. The enclosure must be proof against lateral draughts, while down draughts must also be eliminated. Everything should be simple, easily seen, and cleaned.

The writer has, after years of trial, evolved such an appliance, wherein the chicks are always "comfy" and never stuffy, and can be literally put to bed nightly in fresh aired and clean linen and "tucked in" to any degree thought necessary, with no more risk of asphyxiation than a baby in its cradle.

His own results have been superb.

Correspondence.

FARMERS AND FOWLS.

To the Editor of "Eggs."

Sir,—Your leading article in this week's issu
makes one rub one's eyes, especially whe
Professor Malden's many valuable contributio
to agriculture in the past are recalled. Th
trouble is, I fear, that his views with regard
poultry are shared by some of the senior academ
agriculturists in the country. If this is so, the
are, as you point out—wrong.

Even on a small farm with many handicap
such as buying food in single cwts. we can
better than that. Feeding meat and bone me
at 17/6 cwt., gluten feed at 12/-, and kiln drie
wheat at 11/-, our ration as fed to the birds work
out to 12/5 per cwt. This is 1/3 or just over 1¼
a lb. Allowing Mr. Malden's 5 ozs. a day, whic
is a higher average than we find necessary, a bir
eats 2.3 lbs. a week=2.99d., say 3d. One hundre
and twenty eggs a year are, roughly, two and
half eggs a week, which, at an average of 2d
bring in 5d., so that after deducting 3d. for foo
there is 2d. per bird left. We find that S.P.B.A
methods give a slightly higher average than thi
We have a wage bill of 25/-, but this cannot a
be put to the hens, because other stock and th
garden, etc., share.

One hundred and fifty birds, however, at thes
prices suffice to pay the 25/-, so that anyone ab
to be on the spot and do much of his own wor
will agree with your criticism of the "pessimist
remarks. The cost of rearing, etc., is covered b
sales of birds for table.

One other remark of yours fixes my attentio
You say you thought that the old-fashioned ide
that the value of a food depended on its calor
value had been exploded! I can assure you, Si
that nothing penetrates so slowly into the min
of academic agriculturists as the facts of "Mode
Feeding." For proof of this statement see th
antedeluvian questions set in the N.D.P. an
similar examinations.

I am, etc.,
J. LEWIS ROSEDALE.

PORT ELIZABETH CONTEST.

To the Editor of "Eggs."

Dear Sir,—I feel it is only fair to report to m
friends in the Poultry Industry the splendid treatme
I have received from the Committee and the Secr

(Continued at Foot of Previous Column).

tary of the Port Elizabeth Agricultural Society, Library Buildings, Market Square, South Africa.

My test birds arrived in perfect condition, and every care was taken of them before the competition commenced. I then approached the Secretary to sell the birds to avoid return expenses. This has been done, and the result is £5 3s. 4d. per bird.

I feel it is my duty to let my fellow breeders know that a fair deal can be anticipated for those who wish to enter the Port Elizabeth Contest, and I am certain business will result.

Yours,
TOM BARRON.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, SEPTEMBER 25th, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in larger pply and with a slow trade is cheaper at all markets, the erage quotation being about 11s. 4d. per cwt. as against s. 7d. last week, while samples suitable for seed purposes realise om 12s. to 13s. per cwt. English malting barley is in fair quest, medium quality samples at London making from 12s. 6d. 15s. per cwt., while fine samples, which are scarce, make from s. 3d. to 21s. 3d. per cwt. Feeding barley is in little request d cheaper, averaging about 9s. 6d. per cwt. as against 10s. the previous week. Home-grown oats are in moderate supply d generally sell at about late rates, but at Liverpool prices ve declined 3d. per cwt. on the week. White and black oats w average 10s. and 9s. 4d. per cwt. respectively.

Imported wheat meets a quiet trade at easier values, the erage quotation for No. 1 Manitoba having declined on the ek from 15s. 3d. to 14s. 11d. per cwt. Foreign feeding barley eets a slow demand at easier prices, while imported oats, though in quiet request, mostly realise recent rates. Maize in moderate demand and cheaper at all markets except istol, Argentine averaging 9s. 10d. per cwt.

Milling offals are generally in fair request at recent quotans, but at Bristol prices have declined from 2s. 6d. to 5s. r ton. Meals mostly meet a quiet trade, and both barley eal and maize meal realise less money. Oil cakes meet a nited demand, and any price changes recorded are in favour buyers.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull, 12s; Liverpool, £7 5s: London, £7 5s. Broad Bran: Bristol, 17s; Hull, £8 2s, London. £8 10s. Middlings—Fine (Imported): ndon, £9 7s; Coarse (British): Bristol, £9 15s; Hull, £9 5s; verpool, £9 5s; London, £8 12s. Pollards (Imported): Bristol, 15s; Hull, £7 5s; London, £7 5s. Rice Bran: Bristol, £7 17s; verpool, £7 5s. MEAL.—Barley Meal: Bristol, £10; Hull, £11 8s; ndon, £11 2s. Maize Meal: Bristol, £11 15s; Hull, £10 10s; verpool, £11; London, £11 15s. Maize Meal (S. African): istol, £10 10s; London, £9 15s. Maize Germ Meal: Hull, £10 15s; ndon, £10 5s. Maize Gluten Feed: Bristol, £11 15s; London, £10.

EGGS AND DEAD POULTRY.

Week-end Prices—Eggs (per 120): British, 23s 0d, 17s 6d; Irish, 6d, 21s 0d; Danish, 20s 9d, 20s 0d; Dutch, 22s 3d, 21s 0d; ench, 20s 6d, 18s 6d; Belgian, 20s 3d, 19s 3d; Italian, 18s 0d, 0d; Lithuanian, 16s 6d, 15s 6d, Polish, 13s 0d, 12s 0d; Chinese, 6d, 12s 6d; Russian, 14s 6d, 12s 6d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish, 3d, 1s 0d; Others, 1s 6d. Ducks, 1s 2d, 1s 0d. Geese, 1s 0½d, 10d.

EGGS.

Per Doz.—Ashford: First, 2s 5d; Second, 2s 3d. Birmingham: rst, 2s 2½d; Second, 2s 0d. Bridgwater: First, 2s 9d; Second, 7½d. Chelmsford: First, 2s 3½d; Second, 2s 2½d. Colchester: rst, 2s 4¾d; Second, 2s 1½d. Doncaster: First, 2s 3d: Second, 2d. Dorchester: First, 2s 7½d: Second, 2s 6d. Exeter: First, 4d. Hereford: First, 2s 3d. King's Lynn: First, 2s 2d; Second, 0d. Llandilo: First, 2s 4d. Montgomery: First, 2s 2d. Newport on.): First, 2s 3d; Second, 2s 1d. Norwich: First, 2s 1d. westry: First, 2s 7d. Penzance: First, 2s 0d; Second, 1s 11d. ffron Walden. First, 2s 6d; Second, 2s 1½d. St. Ives (Hunts): rst, 2s 0½d; Second, 1s 11½d. Salisbury: First, 2s 7d; Second, 6d. Skipton: First, 2s 3d. Truro: First, 1s 11d; Second, 1s 10d. elshpool: First, 2s 2d; Second, 2s 0d. *Carlisle: First, 2s 10d. erby: First, 2s 3d. *Ipswich: First, 2s 4d; Second, 1s 9d. incoln: First, 2s 3d. *Shrewsbury: First, 2s 3d; Second, 2s 0d. ork: First, 2s 7d; Second, 2s 5d.

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: rst, †5s 6d; Second, †5s 0d. Exeter: First, 1s 4d. Hereford: rst, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 7d; Second, 1s 5d. wport (Mon.): First, 1s 9d; Second, 1s 4d. Truro: First, 1s 4d. elshpool: First, 1s 4d; Second, 1s 2d. *Derby: First, †5s 0d; cond, †3s 6d. *Ipswich: First, 1s 6d. *Lincoln: First, †5s 6d; cond, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: rst, †5s 0d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 3d: Second, 1s 0d. Doncaster: rst, †5s 6d; Second, †5s 0d. Exeter: First, 1s 3d. Hereford: rst, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 7d; Second, 1s 6d. elshpool: First, 1s 3d; Second, 1s 0d. *Derby: First, †4s 6d; cond, †3s 6d. *Ipswich: First, 1s 4d. *York: First, †6s 0d; cond, †5s 6d.

* At these markets the prices quoted are for sales by procers direct to consumers. At other markets prices are those id to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, September 30th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

Classified Advertisements.

(PREPAID RATES.)

1d. per word—minimum charge, 1s. 0d.; 13 insertions at price of 12. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS,	per line, extra		9d.
DAY-OLD CHICKS,	,,	,,	1s.
DAY-OLD CHICKS	,,	,,	1/6

The number of letters, punctuations and spaces between words should be totalled when the following table will be of assistance:—

9d. size allows for Thirty-one to one line.
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When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

N.B.—Advertisements, unless accompanied by correct amount, will not be inserted.

Advertisements must be distinctly marked with the Heading under which they are to appear.

Advertisements must be written on a separate sheet of paper, and one side of the paper only.

Name and Address to be counted. In the case of a Box Number being used, the words, "Box," "Eggs," 94, Farncombe Street, London, S.E.16, to be counted as eight words, i.e., making a total extra charge of 1s. 8d. (1s. for Box; 8d. for address) per insertion.

Advertisements must reach this office

FIRST POST FRIDAYS

for insertion in the following Wednesday's issue. Those received after this time will be inserted in the next issue.

PLEASE WRITE CLEARLY, and TO AVOID MISPRINTING OF STRAINS, NAMES AND ADDRESSES, THESE SHOULD BE WRITTEN IN PRINTED CHARACTERS.

Displayed Advertisements.

Ordinary Page, £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 9d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Positions by arrangement. Discounts for Series. Full Scale of Advertising Rates on application.

Advertisements, addressed to Mr. S. H. **BURLES, "EGGS," 94, FARNCOMBE STREET, LONDON, S.E.16, MUST REACH US BY FIRST POST FRIDAY MORNINGS,** for insertion in following issue. Those received later will be inserted in the next issue.

A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to The Beeches, Rudgwick, Sussex.

EGGS.

FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C., Longwick P.F., Princes Risborough, Bucks. R.I Reds, Eggs, Chicks, and Stock Birds. List free. Satisfaction insisted on. (See under Ducks and Drakes also).

4

Why it pays to be FUL-O-PEP

Hens fed on Ful-O-Pep Laying Mash lay far more eggs than hens fed on any other feeding plans because Ful-O-Pep not only increases the weekly average of eggs—but *maintains* hens' health and strength, so that the non-productive period is shortened and the years of laying ability are lengthened.

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It is common knowledge that Ful-O-Pep users get at least 40 to 50 *extra* eggs each year from each hen.

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FUL-O-PEP TRADE MARK LAYING MASH

NO MIXING: NO HEATING WATER: NO TROUBLE

The Ful-O-Pep Guide has detailed suggestions for every month in the year, also 12 monthly egg charts for you to record your eggs. Sent free and postage paid.

Ful-O-Pep Poultry Fee s are made and guaranteed by Quaker Oats Ltd., 11, Finsbury Square, London, E.C. 2.

EGGS.

FOR SALE.

Light Sussex Eggs for hatching; He Cooks' direct, mated to Slade's Cocker 7s. 6d. dozen.—Miss Gregg, Little Cha Kent.

Eggs for Early Spring Chickens for livery in October and November: R.I.R Sussex, Sussex x Wyandotte, Wyandott R.I.R. 7s doz.; 50s., 100. Chicks book double above prices.—Wilkinson, Bro lands P.F., Heysham.

LIGHT SUSSEX EGGS for HATCHI Also Red and Brown Sussex, now rea for spring chicken trade; big typi hens. State requirements. Quotation return.—Hodges, Heathfield.

EGGS AND CHICKS.

FOR SALE.

Table Poultry. Now booking orders Eggs, from Special Table Crosses for Spri Chickens; 7s. 6d. dozen, £3, 100; unferti replaced.—Simmins, M.S.P.B.A., Heathfie Sussex.

PULLETS.

FOR SALE.

John Ingham, Woodside Poultry Fa Townsley, near Burnley, Specialist Bree of Anconas. Now is your opportunity secure Britain's Best Anconas: guarante 1924 Pullets; 5s. and 7s 6d. each; carria paid; satisfaction guaranteed. Also Li ted number of Splendid 1924 Black Legh and White Leghorn Pullets, 1925 Pull Prices on application.

Cockerels, Pullets, and few Adults practically all breeds (including impor American Turkeys) for Sale.—Edward Cass, Manager, Mill Poultry Fa Halesowen.—My Name is a guarantee reliability of stock.

White Leghorn (Frank Snowden x Ba ford, both direct), and R.I R. (Bouc direct), Pullets for Sale, at 12s. 6d., 1 and 21s.; from blood-tested, trap-nest stock.—Mrs. Athol Stuart, Boxmoor, Hert

Frank Snowden's "Daily Mail" str White Leghorns; expensive parents. Pullets, March, 1925; superb quality; each. Six February, commenced layi 11s. each. Cockerels, 15s.-20s. each. Seve won prizes.—Harry Whiteoak, The Gran Kildwick, Keighley.

Genuine 1924 R.I. Reds Pullets (Measur mostly through moult; laying; six, 2 Twelve, 52s.; Cock, 7s. 6d. Carriage Pa Approval. Cash Deposit. — Balch, Hi Spring Gardens, Keighley

Genuine 1924 White Leghorn Pullets (B ron's); through moult; point laying; S 24s.; Twelve, 45s.; fifty, £9. Carriage pa Approval. Cash Deposit. — Balch, Hi Spring Gardens, Keighley.

White Wyandotte Pullets, hatched F ruary, 1925; Wilson Beattie and Le Williams: 7s. 9d. each.—Poultryman, To House, Bideford.

We continue to receive repeat orders Pullets. Further enquiries invited.—W and Bacon, Arle Poultry Farm, Chelt ham.

WHITE LEGHORN PULLETS
Fifty Pullets, hatched mid-April; Hans strain; crossed Misses Ranford Cockere 10s. each, f.o.r.—Lynn and O'Reilly, Kin fold Poultry Farm, Billingshurst, Susse

Wednesday, October 7th, 1925.

EGGS

THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN

(Founded in 1912 by RANDOLPH MEECH).

egistered at the G.P.O. as a Newspaper.
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Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months „ „ 6/4
Three Months „ „ 3/3

Extensible Unit Buildings.

Three Type L All-Purpose Houses, each 50ft. x 15ft., accommodating 200 pullets each: houses erected on oak stakes on very steep ground. All equipped with guttering, water tanks, and sliding doors. Owner: Major H. C. Few, Drayton Lodge, Ninfield. Battle, Sussex.

If your pullet egg yield does not average about 200 there is something wrong. Many clients have raised their average from 150-160 to over 200 eggs; we can ensure that figure. Consult us.

Please mention "Eggs."

W. H. COLT, Ltd., M.N.U.P.S., M.S.P.B.A..

Bethersden, nr. Ashford, Kent; and Bush House, Aldwych, W.C.

ALWAYS USE
INTENSIVE HOUSES
BUILT BY
PHIPPS
—of INCUBATOR Fame,
and increase your egg yield
Ask for New Big Catalogue
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'COTSWOLD'
Super-Intensive House.
Sizes from 6ft. to 100ft. in length
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SECURE
BLOOD-TESTED STOCK
NOW!
FROM
John H. Dowden & Son.

We have a number of individually recorded hens in our five varieties,

W.L., W.W., R.I.R., L.S., and B.L.,

also a few stock cockerels, bred from individually recorded and progeny-tested hens. Write for our illustrated catalogue without delay, and secure the pick of these birds NOW.

JOHN H. DOWDEN & SON,
"Heydown," Heathfield, Sussex.

The
'Eclipse'
Poultry
Houses

WITHOUT THE SLIGHTEST DOUBT THE VERY BEST HOUSES EVER MADE.

MAINTAINING THE STOCK IN TIP-TOP CONDITION AND CONSEQUENTLY ENSURING HIGHEST PRODUCTIVITY.

No II. 60 ft. x 12 ft. (six section), supplied to Mr. J. H. McInnes Skinner, Bramerton Grange, Norwich, who, when placing further orders, writes:—

"I have several customers coming this week to see your house, and hope I may be able to get you some orders. I should like to assure you how highly I appreciate the excellence of your house and granary. I do not believe that the former can be beaten either in design, workmanship, or construction. The house is beautifully airy and perfectly ventilated, and embodies every feature that goes to make the perfect poultry house. There is nothing shoddy or second-class in it. The granary is splendidly built, thoroughly strong and substantial. I heartily congratulate you on them both."

Full particulars from the maker—

HERBERT W. MARTIN, Perivale Poultry Farm & Appliance Works,
EAST HARLING, ATTLEBOROUGH, NORFOLK.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, OCTOBER 7th, 1925.

Editorial.

FEATHERED LEGS, ETC.

A correspondent wrote to the effect that among me Black Leghorn chickens which he had purased one had developed a pea-comb and athered legs. Our reply, published in the nswers to Queries columns, in answer to his quest for an explanation, was that it was a peless cross-bred. Commenting on this in his ter, which appears in another column, Mr. rn-Murdoch says :—

> "I can't speak for the comb, but can assure you that feathers on legs do not in themselves prove it to be an out-and-out cross-bred."

He then goes on to say, that he has known veral instances where absolutely pure and studed blacks, mated once only to another black eed, but with feathers on its legs, and also a ud-bred bird of its sort, gave many instances of athered legs with the progeny, and instances curred of such feathered legs in pullets after er ten years continuous mating.

What Mr. Burn-Murdoch has to say is unubtedly correct, but we never hinted that the rd was a hopeless cross-bred because it had athered legs, it was the **combination** of the peamb and the feathered legs which influenced the inion that was expressed. An example of what meant may interest Mr. Burn-Murdoch. The ght Brahma was largely used to make the Light issex; it has yellow legs. In a well-known flock Light Sussex there appeared some years ago, uch to the annoyance of the owner, a number birds with yellow legs. As no outside blood d been introduced for many years, the appearice of these birds was a little puzzling; but it as simply a case of reversion, there was no iestion of their not being pure Sussex. A few eeks ago we were on a farm and were shown a ck of Light Sussex. Here again the yellow leg as in evidence, but with it a rose-comb, sure idence that it was the result of a cross between White Wyandotte and a Light Sussex. There as not a suspicion of its being a case of reveron, and the pea-comb, combined with the athered legs, was sufficient evidence that the rd to which Mr. Burn-Murdoch refers was a peless cross-bred. There is nothing in the history of the Black Leghorn which will account for that pea-comb, but there is something in the history of the Light Sussex which will account for that yellow leg. One wonders now what breeders mean by "pure," and there is need of a definition.

There is nothing in the least surprising in what Mr. Burn-Murdoch has to tell us of the appearance of feathered legs in his Black Leghorns for many generations, after he had outcrossed with another black breed, presumably the Croad Langshan. He must be aware that the individual carries all the characters of his race to a greater or lesser degree. It would be almost true to say that selective breeding is based on the knowledge of this fact—that is, we select for the characters which are most strongly developed in the individual, and which are most economic and desirable. Egg production is racial, high fecundity, however, is individual; it is but the character of the race most strongly developed in the individual.

There are plenty of examples of the reversion to feathered legs. Every breeder of Buff or Black Orpingtons will occasionally find a few of his birds with feathered legs. In the Buff it is a legacy from the Lincolnshire Buff, in the Blacks from the Croad Langshan or the Black Cochin. Light Sussex breeders get it as a legacy from the Brahma, and the same breed is responsible for its occasional appearance in Wyandottes. It will be readily understood from this that the appearance of feathers on the legs is not in itself sufficient to condemn a bird as a cross-bred.

Nevertheless, it is difficult to understand the appearance of feathered legs in pure Black Leghorns, for the Black is a pure breed, and not a composite breed, as is the case with our Orpingtons, Wyandottes, Rocks, Reds, Sussex, etc. In its native state it is a much smaller bird than we are accustomed to see. That attempts at improvement were made by crossing with the Minorca, also with the Ancona, and Brown Leghorn, we are aware; in some cases, too, crosses were made with the Black Rock, but we never heard of any Black Leghorn breeder who either for exhibition or utility purposes used a feathered-legged variety to improve his stock. Of course, a first cross with a Croad Langshan has been common enough, but that is a different matter. We wonder if Mr. Burn-Murdoch will be good enough to explain these feathered legs in his pure Black Leghorns, and whether there was any tendency to broodiness with these particular birds.

A correspondent puts a question which we must confess we find the greatest difficulty in answering, and one it is best to admit at once that we cannot satisfactorily answer. It is :—" This physical constitution which a bird inherits, what exactly is it? Has it any connection with stamina?"

We know constitutional vigour is inherited. Apparently our correspondent wants to know exactly what is meant by the term. When we speak of constitution in this connection, we mean the aggregate of the physical and vital powers of the individual, by vigour we mean their strength or force; the actual meaning of stamina is the fixed firm part of the body, as the bones. That is the literal meaning, but we must not take things too literally. There is the story of the Englishman and Frenchman crossing the Channel. It was a rough night, and the Englishman who occupied the upper berth was a bad sailor and was very ill. During one of his spasms he called out to the Frenchman, "Look out," and the Frenchman **looked out.** So we must not be too literal. As we use the term stamina, it is generally meant to convey the degree of resistant power. We must leave it at that; readers may, perhaps, find a better explanation for us.

The writer's second question arises out of an article which appeared in "Eggs," dated January 28th. In it we suggested, in contradiction to the view generally held, that a hen does not transmit her fecundity through her sons, but that she may transmit through them, to her daughters, the physical constitution which enables them to give fullest expression to the character fecundity. He asks, "What effect can those factors which a hen transmits to her sons have on her daughters?" In our view she cannot transmit through her sons anything but the physical constitution which enables the daughters to give fullest expression to their character-fecundity, and the degree in which it is transmitted depends on the degree in which the son inherits from his dam and his sire. In answer to a third question, in view of the answers given above, we would not necessarily advise the introduction of fresh blood each year.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year began on 1st September.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, wi
answer all queries relating to Ducks. In cases of extrem
urgency answer would be direct, otherwise they will appea
in these columns.

POST-MORTEMS.

" BODIES " for post-mortem examination should be sent
Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarri
Road, West Worthing.

Bodies should be packed and sent by post immediately aft
death, marked for immediate delivery. The fee is 5s. for
reply by post. The name and address of the sender shou
be distinctly marked on the package. Advice of dispatch a
fee should be sent under separate cover to Major Saunders

Readers are particularly desired to observe the above rules wh
sending birds for post-mortem examination and also as
writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to no
members of the S.P.B.A. on payment of a fee of 2s. 6d. p
letter. These are answered by the Editor, and relate
every phase of poultry-keeping except post-mortem exami
tions. Members of the S.P.B.A. are entitled to a reply by p
by the Editor by virtue of their membership (**NOT** fr
Major Saunders).

ALL questions should be addressed to the Editor. Major Saund
does not reply to questions either by post or through the
columns, except in relation to Post-Mortem Examinations.

E. H. L. K. (Kent) has just erected a poult
house, 80ft. x 17ft., and now learns that the la
birds in it died from diphtheric roup. No attem
was made to cure the disease, and the birds simp
died out The house has been empty for years, a
probably the diseased birds were in this house f
or six years ago. He now wants to know wheth
he can safely use this house with ordinary disinfe
ing of Izal spraying, or must he try more her
measures, such as sulphur candles or creosote, eith
of which would be difficult and expensive?—Li
wash with some poison in it would perhaps
cheaper. The point is, how long is the diphthe
roup germ dangerous? This latter question I cann
answer. It would be an "heroic" measure to
tempt fumigation of such a house with sulph
candles, and as "E. H. L. K." does not want
creosote, the Izal spraying would answer if it
thoroughly done. Limewash with a quarter of
pound of crude carbolic acid to the gallon would a
be effective. If later on, "E. H. L. K." suff
from an outbreak of diphtheric roup, it will
necessarily follow that it was because the house w
infected.

S. D. (St. Helens) has 70 Wyandottes and L
horns on free range, having an acre and a half
land, and fed on the following dry mash, hopp
open all day:—Bran, two parts; Alfalfa Meal, o
Thirds, four; Ground Oats, Maize Meal and F
Meal, one part each; Grain, equal parts Oats, Wh
and Maize. One handful to every three birds in
morning, and one to every two at night. Aver
eggs per day 30 of ordinary size, and a few fa

rge. Has had three fowls with the back portion own, which he is advised is egg strain, two he has illed, and he is undecided about the other. — I ather this is a case of prolapsus of the oviduct. If e parts of the mash are by measure, and the birds ave range over an acre and a half, the fish meal ould probably be the exciting cause, and it would e advisable to reduce it by one half. A good feed r the ducks from now onward would be:—One part ran; two, Thirds; one, Maize Meal and Ground ats; and one, Fish Meal or Meal; parts by weight.

T. R. R. (Scarborough). Your friend is right. our hens carry the single comb factor. If you mate em to a male pure for rose-comb, all the progeny ill be rose-comb, but they, or some of them, will arry the single-comb factor, and you can only discover those which are "pure" for rose-comb by reeding. This will involve a great deal of trouble nd the keeping of accurate records. Mate rose-omb hens to a single comb male. Those which throw ll rose-combs will be pure for that character, those hich throw a percentage of single, will, of course, ot be pure. If you mate single-comb hens to a ose-comb male, and they all come rose-combed, you ill know the male is pure for that character. There re no external means by which you can tell whether bird will throw all rose-combs or not. I think you re slightly under-feeding. It would be advisable to ive a full two ounces of grain as the last feed. You hould remember that the birds spend a very long ime on the perch now. We have no records as to he effect of the temperature on egg production. The .P.B.A. will carry out such a test on its experiental farm.

M. H. D. (Newcastle). It is so difficult to advise ou when you send such scanty details. All birds ope and droop their wings when they are sick. It ill not enable anyone to say what is the cause of the ickness. But as all of them are affected, I am inlined to think it is some ingredient in the food. If ou will send me samples I will try and help you, in he meantime it would be advisable to omit the fish eal from the mash as being the most likely cause, nd examine the wheat for mould. A dose of Epsom alts will do the birds good; more than this I cannot ay at present. If you mate Black Leghorn cockerels ith Rhode Island Red hens, you will not be able to etect the sex at hatching.

Eager (Stafford). I think you misunderstand me. am against in-breeding or line-breeding as a system f breeding for egg production. Reasons have already een given in "Eggs." and space will not allow me give them here, but I have never been against the ating of two closely-related individuals, even rother and sister, *if they are exceptional.* By hat I mean possessed not of exceptional egg records nly, but of type, vigour and stamina. Therefore I ould not condemn your idea of mating the Leghorn ock to his grand-daughter as she is such an outstanding bird, and he has bred you such good stock. The cockerels from such a mating should be very valuable. You are quite right, I don't thing Felch's chart is the least bit of value to the breeder for egg production. As I have explained before, the degree of relationship is not the important factor in line-breeding. You may mate two forty-second cousins and two first cousins. If the former have poor constitutions, they will throw poor stock. If the latter have good ones they will throw good stock. It is the individual that counts always. (2) If you make up your mind that you will incubate only the largest eggs, that will not help you to build up a big egg strain. You must breed only from those individuals which have the large egg mode, not those which lay small eggs and occasional large ones. The size of the egg the pullet is going to lay is not determined by the size of the egg from which she is hatched. At the time eggs are selected for incubation they are usually larger than at any time, and a small egg mode hen may lay a sizable eggs at that time. (3) If I were buying a male bird, and paying the price you name, I should expect a better pedigree than the dam's record. The winter record and date of first egg, with size of egg, and sire's dam's record should be included. Why, certainly, I would say that the external characteristics of a male would to a great extent guide me as to whether the record claimed for the dam was correct or not. You will understand the limitations to this

Devon (Barnstaple). I think the real trouble is that you underfed the pullets from the eighth to the fourteenth week. They should have had two mashes a day then, and one feed of grain. There was nothing actually wrong with the feeding, and there is nothing you can do now but give them as much good food as they will consume. A good wet mash would be:—Middlings, three parts; Bran, Biscuit Meal and Sussex Ground Oats, one part each; and Meat and Bone Meal, half a part. I do not think skimmed milk would help them much at this period. My experience has been that milk is not of much value in development after the twelfth week. The addition of two per cent. cod liver oil would be better now. The "lankiness" of which you write is an indication of under-feeding.

"J" (Dorset) sends samples of English white clipped oats at 12s. 6d. This is a very good sample, but the price is rather high. Broad bran at 10s. 3d. is another excellent sample. Maize germ meal at 12s. is good, and good value at the money. Broad bran at 9s. 9d. also good, but it does not compare favourably with the other sample. Sussex ground oats at 15s. are a good sample, and good value at the money. Alfalfa meal at 16s. fair quality, but a little high in price. English sharps at 10s. 3d. contain rather too much bran, and are not particularly good value at the money. If "J." is feeding oyster shell it is unnecessary to feed grit in addition.

POST-MORTEMS.

L. C.—The post-mortem examination of the pullet showed that she was affected with gout, the kidneys being so involved that they were unable to perform their functions of eliminating waste products. Birds showing similar symptoms should receive a full dose of Epsom or Glauber salts, 20 to 30 grains, and be placed on low diet, consisting of grain and green stuff only. Small doses of salts, say, 10 grains for birds of this weight, should be given in the drinking water every other day for a week or ten days, this to lower tension and to promote elimination.

B. P. C.—The post-mortem examination of the 1924 hen, No. 532, showed that the cause was peritonitis, due to perforation of the intestines in several places. The perforations were caused by ulceration of the intestinal walls due to the activities of tapeworms, the Davainea Echinobrothrida, the condition produced being aptly termed "nodular taeniasis." Birds so far advanced as this would not recover under treatment, but I should advise the "worming" of the rest of the flock. For this purpose one teaspoonful of powdered pomegranate root bark may be mixed in the mash for 100 birds, to be followed some hours after with another mash containing 1½ozs. of Epsom salts for a like number.

Some Fruit-Growing Notes

to help Poultry-Keepers.

By **F. W. WHEELER, F.R.H.S.**

APPLE STORAGE.—As I have had enquiries
to where the " Oiled Wraps " for apples to be stor
could be purchased, I think it may be useful to oth
readers if I give the address to-day.

Mr. P. M. Miller kindly sent me a leaflet, issued
the Devon County Horticultural Society, with phot
of the experiment I mentioned in my notes of Se
tember 2nd, and in a letter he told me that Messr
Geo. Moor, Ltd., Sundries Department, Cove
Garden, London, sold this specially-prepared pap
at about 2s. per 1,000. Possibly it could also
bought in sheets, and then cut up to varying size
Other points of interest that I did not mention befo
were that " No specially constructed store room w
needed; no special trays or shelves," and that on
"standard bushel boxes were used, and they we
stored away in ordinary packing sheds from Octob
to February 27th." The appearance of the Oiled Wr
Fruit was better, in fact they looked " just as fre
as when picked," and, further, that although cond
tions were similar, these apples were also kept fr
from skin spots which attacked the other two expe
mental boxes which were not Oiled Wrapped.

AUTUMN NOTES (Continued), No. 3.—It may
remembered, in my last notes I had to break off wh
mentioning certain important points which requir
" immediate consideration " at this season of the ye
if we are thinking about planting fruit trees th
winter.

I touched briefly on the questions: Soil, situatio
selecting trees, early planting, and age for them wh
planting. The next point the Poultry-Keeper mu
remember is that taking all the arguments into co
sideration that "half standard" form of tree is the be
proposition for this combined farming. The "bus
tree would give a quicker return by coming into be
ing sooner, but they can only be advised for his kitch
garden, or in the runs which he intends to reserve
the rearing of chicks. On large poultry farms
" Standard " might be considered, but to repeat m
self, I prefer, for main planting, the half standa
The question as to what stock has been used for gra
ing is important, and the nurseryman should be co
sulted when ordering, as not only does the stock va
according to whether you have standards, half sta
dards, or bush trees, but also certain varieties
better on a "free stock" or "paradise," irrespecti
of the form selected. The reliable nurseryman w
always advise you in the matter.

It will be noticed that I am not entering into detai
or names of trees to-day, but simply suggesting thin
for early consideration to avoid hasty ordering
planting at the last moment, and very often dis
pointment by not getting just what you want, or oug

(Continued at Foot of Previous Column).

to have for successful working—I say advisably " ought to have," for I would warn readers about buying haphazard or bundles of trees at Auction Room Sales. These types of trees are not cheap at any figure.

The number of trees you will require is another item for early decision, so I had better touch on that next. It is probable, on account of the irregular subdivision of the fields into wired runs, that equal distances between trees cannot be arranged, so the chief point of warning is that they should not be overcrowded. Taking the half standard type of tree, I think it best on the poultry farm to allow at least 15 feet between the compact or upright growers, and increase up to 20 feet for the vigorous or spreading varieties. Bush trees can be from 12 to 18 feet apart, and if you decided on any standard trees, then from 20 to 30 feet apart is best.

Be sure and keep quite free of any risk of branches eventually coming in contact with the wire netting, as not only will it damage the trees, but the wounds caused are just where diseases start to attack them, and much evil wrought for want of thought. Also bear in mind the need of clear gangways for taking a cart through the runs or orchards.

With these points in mind, you can easily work out the approximate number of trees to order quickly, and avoid disappointment when ready to plant, for good trees are soon booked up by fruit growers. Some remarks on preparing ground and planting must form the subject of my next article.

Table Poultry Production.

A Lecture delivered at the Midland College Conference

By JOHN H. DOWDEN.

Continued from Page 220.

The question of HOUSING growing chicken I ve found is best solved by the use of the old-shioned Sussex Night Ark. We have a very ge number of those in use on our own farm, and strongly recommend them. This house, of which have a model here, has a slatted floor, and no rches are used when the birds housed are in- ided for table use. Crooked breasts are thereby tirely eliminated, and it will be seen by this odel that ample ventilation is afforded, both top d bottom. No cleaning out is necessary with s house, as all droppings fall through the slatted or. Where ground is limited, a dropping board n be placed underneath the ark, but in my case, th unlimited free range available, the house is ifted to a fresh piece of ground every day. The ds are housed in these arks up to the age of to 14 weeks, as an average rule, and then trans- red straight to fattening coops. I have also a odel of this appliance here.

One of the chief points to bear in mind when aring chicken for this purpose is the maintenance a steady rate of growth. It is imperative that check in growth should occur, as if the birds once allowed to lose condition they rarely, if er, recover to make first-class table poultry. ed your stock liberally from the commencement, th a view to clearing at the earliest possible ment. In many cases, unfortunately for the ner, these birds are given just a maintenance ion, with the result that they are on hand for veral weeks longer than they need be.

I think I have sufficiently impressed on you the portance of keeping the stock in good healthy, mp condition. This cannot so easily be done if birds are fed on some of the rearing mashes common use to-day, or if the cockerels and llets are allowed to run too long together. As on as the cockerels are separated the mash should nsist of Sussex ground oats, sharps, maize meal, d "Dento" Marrow Meal. The last-named in- edient I find very excellent for growing stock.

FEEDING.—When the birds are placed in fatten- coops at about 12 weeks old the mash must a wet one, and is best composed of Sussex ound oats, and this should be mixed with mmed milk if possible. Failing this, condensed dried milk may be used. Two of the most im- tant points to watch during the coop feeding iod are the consistency of the food and the ount given. During the first day or two the d should be quite thin, gradually thickening as time goes on, until at the final stages and during the cramming period it should be quite thick. A common mistake in fattening is to over-feed in the early stages. This must be avoided, and at no time should the birds be given more than they will completely clear up in 20 minutes.

Place the coops in a sheltered position in the open, where it will be found that the birds will thrive far better than if enclosed in a building. They require no water, grit or green food when in the coops. It will be found that after the tenth day some of the birds will lose their appetites as a result of the confinement, and when this occurs they should be crammed twice daily, or, in the case of small birds with small crops, thrice daily is necessary for the best results, and in order to bring them to marketable condition at the earliest date. I do not recommend the sending of partially fattened birds to the market. It will in all cases be found to be advisable to cram them artificially for a short period. It is this little extra feeding which gives the finish and the bloom, and, as before pointed out, it is these finishing touches that count.

It will be seen from the above that there really are no secrets. There are, of course, as in most other undertakings, rules which must be strictly adhered to if the best results are to be obtained. Having mastered the routine practice is necessary, both in the arts of trough feeding and cramming, and in addition to this a study must be made of the best methods of killing, plucking and preparing for the market, for it is these details that largely determine the price realised by the finished article.

The actual CRAMMING is an operation which needs a good deal of practice, or damage will be done to the crop of the bird. The cramming tube should be passed to the entrance of the crop only. The crop should only be partially filled for the first two or three crammings, and it will often be found that the bird will peck a little food from the trough after having been crammed. If it will do this so much the better, as it expands the crop. A week or ten days of cramming should be quite sufficient to put the finishing touches to the birds. Except in the very hottest weather they may be crammed the night prior to killing. The killing and plucking of the birds must then be mastered, also the shaping and pressing. This latter is a very important point, since if they are carelessly killed, plucked and packed, much of the benefit obtained from careful fattening will be lost. If haphazard methods are employed, senders to the market must be prepared to accept just what their produce will realise from an unwilling buyer. The fact that white-legged table birds realise more per lb. than yellow-legged is sufficient to demonstrate how much depends upon pleasing the eye when marketing.

As an instance of this, may I cite the half-pound or ordinary chocolates, most beautifully packed in an attractive box, with an immense bow of blue ribbon to fasten them down. They realise far more than the same half-pound of chocolates in a paper bag. There are very few senders to the market who really pay sufficient attention to the packing.

I have a model here of a pad, which most of the Sussex fatteners use, and, in passing, I might say that if any of you have any difficulty in obtaining these different appliances I shall be pleased to put you in touch with a reliable maker.

Circumstances must decide for the individual whether he shall sell locally to private customers or send to the big City centres. If the last-named course is adopted, find a good salesman, study him and his requirements, and he will study you. Those people who market their produce carelessly, dumping it on to the market regardless of costs or returns, are doing their best to make it impossible for the more serious and hardworking poultry farmers, in addition to the fact that such a course must inevitably spell disaster to themselves.

With regard to the COST OF FATTENING birds for the table, I have found that the average cost of food to the "petits poussins" stage works out at about 5d. per bird. The additional cost of feeding up to the age of fourteen weeks, i.e., a further six weeks beyond the former stage, is about 8d. or 9d. per bird. I personally find that my White Leghorn cockerels make very excellent table birds, the later hatched ones weighing as much at seven or eight weeks of age as those of other breeds. In many cases they even maintain this condition up to the coop fattening stage.

I should like, in conclusion, to throw out a suggestion to the teaching institutions, that they should have a fattening plant as a permanent adjunct to their farm. It would thus be possible for students to obtain a thorough training in the various processes, and interest in this branch would thereby be stimulated.

I have purposely avoided making my paper a very long one, as I am of the opinion that the lecturer can always learn something from his audience, and I am looking forward to learning a great deal from the discussion which I hope will now follow.

THE 1926 S.P.B.A. REGISTER.

We are now busily preparing the 1926 Register, and hope to make it at least as good as those that have preceded it. We have already received promises of some articles from the pens of experts which will prove most useful and interesting to our members. We shall be glad to consider any articles of permanent interest from our members, those dealing with personal experiment will be most acceptable. The forms for the Registration of Pens are now ready, and will be sent on application. We would ask our members who wish to register their pens to read most carefully the full instructions sent out with the forms, and to note that only pens which exactly conform to the rules can be accepted. If this is carried out, much time and annoyance will be saved. Each year the Editor has to send back a number of forms which are incorrectly filled in, or which do not comply with the rules, and this causes delay and oftentimes disappointment. The forms when filled in should be sent to the Editor as soon as possible, and **in no case** can Registration Forms be accepted **later than October 16th.** All applications for Registration Forms should be sent to Rev. H. Mudie-Draper, 25, The Chase, Clapham Common, S.W.4.

Correspondence.

FEATHERED LEGS, ETC.

To the Editor of "Eggs."

Dear Sir,—May I comment on some articles th
have appeared lately in "Eggs."

CROSS-BREDS. You state that a Black Le
horn, I think it was, showing feathers on its le
and a pea comb, must be a hopeless cross-bred.
can't speak for the comb, but I can assure you th
feathers on its legs do not in themselves prove
to be an out and out cross-bred, as I have known
several instances where absolutely pure stud Blac
mated once only to another black breed, but wi
feathers on its legs, and also a stud-bred bird of
sort gave many instances of feathered legs with t
progeny, and instances occurred of such feather
legs' pullets after over ten years' continuous mati
to absolutely pure-bred Black Leghorns, now a
then would give progeny showing feathers on the le
I am too short of time at present to work out t
percentage of "feathered" blood in such tenth ye
descendants. but it may be very small indeed, a
most certainly could not be called a cross-bred
the ordinary sense of the word, as I suppose some
our best known "pure bred" strains of various bree
are known to have been out-crossed since then,
recognised as "pure-breds."

SEX-LINKAGE, as per W. R. Morris-Hammo
—I gather from his letter that he has not actua
gone in for Sex-Linkage work on a large scale,
wants to hear from one who has. Personally spe
ing, I cannot see how it can ever pay to do so.
instance, Mr. Hammond estimates that for a co
paratively small flock of 2,500 birds he will have
keep a pure-bred establishment of at least 345 bir
male and female. In other words, to overcome
loss of "£15" or so, he will have to run quite a
spectable-sized stud-bred farm, with all its necess
worries and expenses which must be incurred if
wants to breed a stud-bred flock from which
could get reliable parent stock. Perhaps I h
mis-read Mr. Hammond's letter, or the mean
thereof, but it would appear to me that in order
avoid a very small loss, or tax, say, of about fift
to thirty pounds, he purposes investing extra cap
in hand, stock, runs and labour, that would run
several hundreds of pounds.

This is, of course, utterly apart from the gr
glaring objection to sex-linking, namely, that once
is recognised in "Poultrydom," the whole indus
will be put back many years by flooding the coun
with absolutely useless cross-breds sold by Di
Tom and Harry as first-cross sex-linked layers wh
as they really are first-class missing link liars.
Sir! Give me pure-bred light breeds for egg prod
tion, and as for cockerels, I kill barrow-loads of th

ery season at a few weeks old as I cull out for breed- g males, and cold storage solves my troubles, so far ; loss goes. I think a point that these sex-linkers iss is thus given. You run a flock of first-class pedi- ee light breeds for egg production and selling of liable *male* breeders, you have of necessity to breed much larger number of cockerels to cull from than u will ever be likely to sell as breeding cockerels. o sex-linkage or not, you have to lay out a lot of sh, etc., in producing a reliable breeding sire. The vice imagines that practically every male chicken ill do for a sire, whereas the practical breeder knows at perhaps, year in and year out, not 20 per cent the cockerel chickens hatched will ever come up to is ideas of what his cockerels must be.

Does Mr. Hammond take this into account when e talks of his "annexe" of 300 pure-breds? I have lked over this matter *ad nauseum* with various ultry keepers, and, one and all, when they have gured out the idea, have given their verdict as Nothing Doing."

Yours truly,

(Signed) J. H. BURN MURDOCH.

As that part of Mr. Burn Murdoch's letter referring to pure eds and feathered legs is connected with a reply in the nswers to Queries' columns, we have answered it in Editorial. wing to lack of space, we were compelled to omit that por- on of his letter which described the skinning of a rabbit.— Editor).

B.W.D. AND ROUP.

To the Editor of "Eggs."

Dear Sir,—There is one paragraph in Mr. Brain's ticle on "The Cure and Prevention of all Diseases Poultry associated with the Respiratory Organs," hich calls for special attention.

The article itself is an admirable one, and is in all robability correct in nearly all respects.

The paragraph to which I refer is rather long, but will repeat it in full so as not to misquote it:—

"Now it has appeared definite to me for some time, fter following up cases of chicks that have developed .W.D. from parents known to be pure, blood-tested ock, parents that have given negative to any test of .W.D. in their blood, yet the chicks have developed nd report given as to B.W.D. being the cause. It is ot for me to depreciate the value of blood testing. do not wish to do that, but it does appear to me that B.W.D. can be acquired in chicks from free parents, hat a waste is going on by the blood-testing of arent stock."

Mr. Brain says: "It is not for me to depreciate the alue of blood testing," and then he proceeds to do so.

I have no doubt that the experiments that he has arried out with respect to B.W.D. have driven him those conclusions; other experiments have been arried out, and the conclusions do not altogether gree with his. I think that it is admitted all round at still very little is known of the disease.

The real issue is: Shall the policy of the future be Prevention is better than cure," or not?

Certainly Mr. Brain advocates the use of Visol in the breeding pens as a preventive against B.W.D. in the resulting chicks, but this prevention must go back one step further. I have no doubt that chicks which have been bred from parents which have given a negative test have developed B.W.D. He does not tell us whether stock which has given a positive test has been cured of B.W.D

I think that it is now fairly admitted that B.W.D. has increased enormously in this country in the last few years. At the present rate of progress, unless drastic steps are taken to check it, it will become as big a menace to the country as foot and mouth disease was. At the present time the only method which goes back to rock bottom is Blood Testing. Although it reacts in unaccountable ways, it does at least remove the majority of carriers from the breeding pens. B.W.D. has now spread far afield from the big farms. If it had remained in the big farms it could be more easily competed with. It has now gone to the small farmer and cottager, who practically never have their losses "post-mortemed," and, therefore, do not know the real cause of death. I think that it is a very great mistake that the Board of Agriculture do not insist on their egg stations containing all blood-tested stock. There is no legislation to make a station holder have his own losses "post-mortemed." Although foot and mouth disease, and B.W.D. do not resemble each other in many ways, their methods of extermination do. Foot and mouth disease is pretty common in Eastern Europe, and there are several fairly effective methods of short period, so called cures.

In the last great outbreak of foot and mouth disease in this country there were a good many individual pathetic cases, but, I do not think that now anybody seriously denies that the Board of Agriculture slaughter policy was the right one

At present this country leads the world in the export of the highest class of blood stock, but we shall no longer do so when we give up the most drastic policy of competing with serious infectious diseases.

The S.P.B.A.'s policy of "Prevention is better than cure" in the Inoculation Controversy was the correct one, and I hope that they will maintain it.

Yours faithfully,

P. S. CAMPBELL.

FARMERS AND POULTRY.

To the Editor of "Eggs."

Dear Mr. Newman,—It was with great interest that I read your Editorial of September 16th.

The masterly manner in which you dealt with Mr. Malden's pessimistic outlook, so far as the production of eggs is concerned, leaves little more to be said on the subject, but I should like to put on record the grotesqueness of his views, with regard to the fattening industry.

As you know, I reside in the heart of this Sussex industry, and can therefore speak from personal experience. So far from it's being a fact that the fattening business is declining, at the present day it is much larger and more prosperous than before the war.

The local weekly market, which is run by Messrs. E. Watson and Sons, have for some time past sold to the fatteners between 2,000 and 3,000 birds on their market day.

There are fattening plants in this vicinity, who specialise in this business, and maintain stocks of between 5,000 and 6,000 birds at a time for fattening. There are also numerous smaller plants which fatten upwards of 1,200 birds at a time. In addition to these instances, I have a fattening plant installed on my own farm, which, although quite subsidiary to the main objects of the farm, being used chiefly for fattening my surplus cockerels, together with all mismarked or otherwise imperfect birds, furnishes me with sufficient first-hand evidence that, although foodstuffs are 50 per cent. dearer than in pre-war days, present returns are proportionately better than then.

Of course, in this, as in any other undertaking, one needs to be a practical man, and not merely a theorist, in order to succeed, which perhaps explains why Mr. Malden is no longer fattening in Sussex.

The fatteners have altered their procedure, and do not now send the major part of their supplies by railway transit, but direct each night by 5-ton lorries to the London markets. In addition to this many tons are despatched by rail to innumerable retailers in Brighton and other coast towns.

So far as prices are concerned, at the Heathfield Market, during the spring season this year, good heavy cockerels went up to 12s. each, and cockerels run on to 16 weeks and not fattened were fetching 9s. 9d. and 10s. each.

Mr. Malden is in such a hopeless state of mind that I am only too pleased to give you these facts in order that he may see that there is a certain amount of joyousness in the poultry-keeper's life, and should he require further facts, or any proofs, I shall be delighted to furnish these, either through the offices of your journal, or personally, if he cares to visit this very prosperous centre of the table poultry industry.

Yours very truly,
JOHN H. DOWDEN.

NATIONAL DIPLOMA IN POULTRY HUSBANDRY.

The examinations were held at the Harper-Adams' Agricultural College, Newport, Salop, September 14th to 18th, at which twelve candidates presented themselves. The following candidates passed in all subjects, and will be awarded the Diploma by the National Poultry Examination Board, when it is satisfied that all regulations have been complied with:—Miss I. S. Bremner, Mr. F. C. Bobby, Mr. I. W. Rhys.

Four candidates passed in all subjects in Section B, and in accordance with the regulations may sit for Section A next year. Three candidates failed in two subjects, for which they will be entitled to sit again, and two candidates failed in the examination. Reports of the examiners will be published when received.

THE MIDLAND AGRICULTURAL AND DAIRY COLLEGE,

SUTTON BONINGTON, LOUGHBOROUGH.

POULTRY CONFERENCE.

There was a large attendance at the Poultry Conference a the Midland Agricultural and Dairy College, when P. A Francis, Esq., Poultry Commissioner of the Ministry of Agriculture, presided. He pointed out that it was a promisin sign of the times that the general farmer was taking a grea interest in poultry-keeping, and referred to the number of egg which came into this country from abroad, which market, h stated, should be entirely in our own hands.

Professor Willard Thompson, Director of the National Institute for Poultry-keeping, opened the session with an addres on "The Poultry Flock Should Pay Dividends—How an Why?" He pointed out that the human element in poultry keeping was an exceedingly important factor. Some men coul handle a large number of birds satisfactorily, others a fe indifferently. He maintained that they should not look fo advanced prices, but rather better methods and cheaper production, and that whatever the other side lines the genera rank and file of poultry-keepers must look to table egg production as their main source of profit.

He pointed out the desirability of so "switching the season on the hen" that there was a heavy winter egg production,

He urged the necessity for trap-nesting for breeding fo capacity, and stated that it was desirable to remember tha the capacity for high production was vested in both the he and the cock.

He contended that good sires should not, in many cases, b disposed of at the end of the season, and also pointed out th importance of extra light during the winter months.

Mr. A. H. Brain, of West Bromwich, gave a very comprehensive and instructive address on "Diseases," with specia attention to Roup.

He pointed out that roup in many cases was a result of ba housing and insanitary conditions, and partially to unsatisfactor feeding. He considered that the stethoscope would play a muc more important part in the future in the selection of hens fo egg production, and urged that poultry diseases should not b in the hands of the veterinary surgeon entirely, as he considered the medical profession to be of great assistance.

After lunch Mr. J. H. Dowden gave a very practical addres on "The Sussex Method of Table Poultry Production," an pointed out that what he had done in Sussex could be done b other poultry-keepers throughout the country. He stated tha if the maximum profit was to be obtained from fattenin chickens they should be kept going from the start, as chicken which have been starved in the early days never put on fles in the same manner.

He also drew attention to the importance of getting the bird on the market as early as possible in the season as price gradually drop, and in August are very low in London. Th market, he maintained, was waiting for the first-class article.

Mr. G. A. Palmer, of Hinckley, opened a discussion on "Th Danger of Extremes in Poultry-keeping." He stated that extremists were noisy and insistent, and attempted to force the lob-sided views upon the unwary. He considered that in breeding had been responsible for much evil, and advise poultry-keepers generally to stick to the well-proved method until some very definite improvement should be shown. H also stated that the craze for excessive egg production ha lowered the vitality in many flocks.

The speakers and the chairman were heartily thanked at th close of the Conference, and the Principal warmly congratulate on its success.

Correspondence—Continued

MR. BRAIN'S ARTICLE.

To the Editor of "Eggs."

ear Mr. Newman,—If space will permit. I should
to make a few remarks on Mr. Brain's article.

ost of it is very sound advice, and should not be
lected by any who have the health of their birds
heart. There are several points, however, with
ch I am at variance with him, and I am sure he
not mind a discussion arising thereon if we can
any nearer the truth thereby.

n the first place I do not agree with him that
htheric Roup, etc., are diseases of the respiratory
ans, or that they have their origin necessarily in
ls or simple Nasal Catarrh. For instance, when
up broke out on this farm there were no birds with
ls, and there had been none for several months.
first signs I had were cases of canker in the angle
he mouth, and, unfortunately I was informed, I
not say by whom, that this was not infectious.
onsider it a disease quite apart, the same as
htheria in human beings is quite apart from any
ls they may have. If it is a disease of the respira-
organs, how does he account for its appearance
the head ornaments and the vent? That it does
ch of its deadly work in the glands of the mouth
throat I do not deny, but I do not believe it
inates there. I fully believe it finds its way into
blood through the digestive system. Colds un-
btedly lower the resistant power to disease, and a
k of birds which have been suffering from colds
liable to pick up anything in the way of disease
ch may be about. Is it not so with ourselves?

here is little doubt that in some of the mysterious
reaks where sanitation, housing and cleanliness
all that can be desired, it has most likely been
ied by wild birds, but in many cases I am con-
ed that dirty conditions somewhere have been the
se. Perhaps the ground around the houses, the
er supply, or insufficiently clean utensils.

also cannot agree with him where he says: "Birds
ng no other opportunity such as we have of get-
rid of their blood impurities through the skin by
piration, Nature in her mechanical design affords
one method of escape, and that through the
iratory organs, nostrils and mouth"

he kidneys and liver both have most important
in blood purification as well as their other func-
s with birds as much as other animals.

e claims, I see, that "B.W.D. is no more or less
a condition of Diphtheric Roup," and yet before
he tells us "The bacteria or germ of Diphtheric
p and Bird Pox is said by Bacteriologists to be an
trable one. That is, that it cannot be found; its
e or formation cannot be defined under the
oscope."

ad of B.W.D. 'B.W.D., another toxic bacteria
he blood. This germ, or bug as the pathologist

(Continued at Foot of Next Column).

London Market Advice Table.

By **A. Y. CLARKSON.**

OCTOBER, 1925.

This month should mark the commencement of a steady increase in the realisation prices of Chicken.

There is room for improvement in prices, which have been very low this summer.

The improvement would be more rapid but for the fact that from the first of the month Pheasants start to arrive, and they are always in demand in preference to poultry for this month. However, owing to the manner of the production of poultry in this country, the London Market very seldom receives too much good class table chicken at this time of the year.

CHICKEN.—Chicken of good quality will be in fair demand from now onwards, providing they scale 1½ lbs. or over when killed and plucked.

During October we sometimes strike a patch of very muggy weather, and those who are in the habit of sending their chicken killed and plucked should be sure and use a well-ventilated crate and so prevent the birds turning during transit.

HENS.—The demand for hens automatically increases as the colder weather arrives.

For a general rule it is better to send hens to London alive. The Light breeds should be packed separate from the Heavy breeds.

RABBITS.—Wild rabbits are now very much in demand, and those who followed my advice from a few months back will easily be reaping the benefit of their efforts. Wild Rabbits should be clean paunched and sent whilst fresh; they should be packed in the special open hanging crates as supplied by the salesman.

DUCKLING.—Duckling, if white and scaling 4½ lbs. or over when killed and plucked, are needed.

Old or coloured runner ducks should be sent up alive.

GEESE.—Geese to realise top market price should be coop or pen fed for three weeks prior to marketing. Those which have not been so treated do not realise anything like so much as those which have, as their appearance when dressed is very poor.

---

calls it, has been isolated and cultured, and called 'bacillis pullorum.'"

How can they be the same when the bacilli are so different. Because similar methods employed with dealing with Diphtheric Roup have reduced loss from B.W.D., it does not by any means prove that they are one and the same thing. Neither can any remedy which cleanses the blood stream be of much use for Coccidiosis, which is an internal parasite working mainly in the intestines.

One other thing, and that is, I think it rather a dangerous thing for him to say that wet roup is not contagious. This has not yet been sufficiently proved, and is liable to lead less-informed people astray. Rather treat the whole jolly lot as contagious, and run no risks.

Yours faithfully,

(Signed) CHAS. E. HAWARD.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

IMPORTANT NOTICE.

The Annual General Meeting will be held on Wednesday, October 21st, at 4.15 p.m. in the afternoon, in the Council Chamber at the Holborn Restaurant.

Following the business meeting, a dinner, at which Mrs. Hunter, President of the S.P.B.A., will preside, will be held in the King's Hall, of the Holborn Restaurant. Reception at 6.30. Dinner at 7 p.m. Tickets will be 10/6 each, exclusive of wines, but including all tips to waiters, head waiter, and wine waiter.

It is earnestly requested that early application be made for tickets, as a heavy demand is expected, and accommodation is limited to about 250 seats. Tickets will be posted on October 14th. It may be impossible to comply with applications received after that date. Until it is found how many members wish to attend the dinner, it will not be possible to arrange for them to bring guests. Application for tickets to be made to

Mr. TOM NEWMAN, Rudgwick, Sussex.

Envelopes to be marked "Dinner."

Cheques or postal orders must accompany applications for tickets. All applications will be dealt with strictly in rotation.

Morning dress will be worn.

Scientific Poultry Breeders' Association,
RUDGWICK, SUSSEX.

Dinner, 1925—Holborn Restaurant.

October 21st, 1925.

Please send me .... Dinner Tickets at 10/6.

Amount herewith £ : :

(Cheques should be made payable to Tom Newman or Bearer.)

I desire, if possible, to sit near or be grouped with the following :—

....

Signature ....

Address ....

....

To the Secretary,
S.P.B.A.

ELECTION OF COUNCIL.

With each copy of "Eggs" this week is enclose
voting paper, and the Council hope that members
duly record their votes.

In past years, when an election has been necessa
the percentage of members who have troubled to rec
their votes has not been so high as it should h
been.

It is unnecessary to refer here to the services r
dered to the Association by the retiring members
the Council who are offering themselves for re-electi

Mrs. Clay, who is President of the Keighley Bran
has done splendid work for the Yorkshire Federati
and hospitably entertained the members of
National Poultry Parliament on their recent visit
Harrogate.

Mr. Michael Phelan is well-known to a very la
number of our members. As a breeder he has secu
many successes in the Laying Competitions, and
readers of "Eggs" will know him as an advertiser

S.P.B.A. GENERAL MEETING. RESOLUTIONS.

The following resolutions have been received
the Annual General Meeting, to be held in
Council Chamber at the Holborn Restaurant,
Wednesday, October 21st.

By Mr. P. S. Campbell :

BLOOD TEST.—"That all breeding stock o
farm which carries registered pens should h
passed the Agglutination Test. The condit
and time of testing to be settled by the Cou
of the S.P.B.A."

By the Wadhurst Branch :

BLOOD TEST.—"That this meeting beli
that the time has come when only blood-te
stock should be allowed in the Register of
Association, and it urges the Council to inv
gate means for procuring ready and cheap facil
for the testing of members' stock."

By Mr. W. H. Farnell :

WEIGHTS OF BIRDS.—"That the weights of b
in the pens entered in the Annual Register s
be recorded as well as the numbers and siz
egg, and that the Council be instructed to c
up a standard for members' guidance. B
below the minimum body weight suggested
not be registered."

By Mr. F. J. Hemelryk :

ANNUAL SUBSCRIPTIONS.—"That the an
subscriptions be increased from 5/- to 10/-
annum, half of which be earmarked as subscri
to the National Poultry Council."

FOOD PURCHASE SCHEME.

At the Annual General Meeting I hope to make some interesting announcements in reference to the Food Purchase Scheme, which will be very gratifying to our members. We are just feeling our way. Up to the present even the comparatively small effort we have made has proved of the greatest benefit to our members, and we have received scores of appreciative letters. The fact that we have bought nearly £10,000 worth of foods alone during the past six months testifies the appreciation of our members for the scheme. There is no change in the price of mashes from that of last week. The demand has been very extraordinary, and is fast increasing. I am glad to say that we are finding greater readiness on the part of the trade to co-operate with us, and we are hoping to overcome many of the obstacles in our path.

VERY INTERESTING.

The following is the summary of a letter received from a member:—

> He visited a Yorkshire show, and was interested in some samples of Veterinary Cod Liver Oil. Pressed to buy he refused, but said they could send him a price list late in September. He was asked to write his name on a bit of paper, and did so, and forgot all about it. On September 4th he received a letter saying that a barrel of cod liver oil had been sent off as ordered by him. He replied that he had not ordered, and would not accept delivery. On the 8th he received another letter asking him to change his mind. He refused to do so, and immediately received a letter from their solicitor, and now writes asking advice from the S.P.B.A. He had never ordered the oil, and would have no use for such a quantity. The price is 5/9 per gallon, and he had already been offered some at 1/- less by a firm of repute. Enquiry at the station disclosed the fact that nothing had been heard of it there, so the statement that it had been sent off was incorrect.

Letter from the firm's solicitor:—

> "Dear Sir,—My clients, Messrs. ———, have consulted me with respect to the order which you gave on the 23rd of July, 1925, for a 40-gallon cask of cod liver oil.
>
> I understand you now allege you did not give any order, but this order is now before me, and there is no doubt that the signature to the same is yours, as shown by a comparison with the signature on your post cards to my clients.
>
> My clients have been put to considerable expense with respect to the cod liver oil, which has been especially prepared for poultry, and I must ask you to give your instructions at once for the cask to be forwarded to you, as otherwise my instructions leave me no alternative but to take proceedings."

The matter was then laid before our Hon. Solicitors, Messrs. A. E. Hamlin and Co. The following is their reply:—

> "Dear Sir,—We are in receipt of your letter of the 28th inst., enclosing letter from Mr. ——— and a letter from Mr. ——— to him. Since the order appears to have been obtained by the traveller by means of a trick, we do not think that Mr. ——— would be held liable for the cost of the oil. The solicitors should be informed that the order was obtained by a trick, and that Mr. ——— repudiates any liability."

And so for the present the matter rests. It is of interest because of the manner in which orders are often obtained from the unsuspecting visitors to shows, and, as we have these upon us, it is just as well to bear the case in mind.

THE WELLINGHAM EXPERIMENTS.

The following is the report received from Miss Malcolm on the S.P.B.A. Intensive Experiment for the month of August:—

> "The birds in this experiment were seven months old on the 31st of this month. They laid during the month 2,238 eggs. Following the heat wave in July, the birds showed a noticeable paleness, and were not so active. When the weather changed in the second week in August, there were a few cases of cold, and these birds were removed. After a few days' treatment they were returned to the house. A certain number of the early-matured birds (in the side of the house used for the birds trough-fed with grain for the supper feed) suffered with pullet moult. For this reason there was a decline in first-grade eggs. A good many birds continued, however, to lay through their pullet moult. On the whole the health of the flocks has been, in spite of the above drawbacks, satisfactory"

As it is intended that a full report of the experiments will appear in the Annual Register, I do not intend to make much comment on it here. As indicated, the birds suffered from colds, and this will prevent our being able to satisfy ourselves, as to whether by trough feeding grain we might prevent the partial moult or not. That experiment we must hope to make next year. One lesson learnt from the experiment has been the effect of intense heat on birds confined to a house. This in spite of the fact that the whole front was removed, and the house was well ventilated, and that at no time were the birds exposed to the full glare of the sun. Relief was obtained when the roof was lime-washed, and covered with boughs, but in future we must provide against it. It makes one wonder whether or no the poultry-keeper has sufficiently studied the effects of extremes of temperature. In any case a simple experiment in this direction can be made on the S.P.B.A farm next summer.

ELDERBERRIES AND BLINDNESS.

A correspondent writes she has a duckling which has gone totally blind, and she has been told that it is due to the eating of elderberries, while she herself suggests that it may be due to the eating of the berries of the deadly nightshade. I should hardly think that it was traceable to either of these causes. I have kept birds under an elderberry tree myself, and have known several other people who have done so. but I have never heard of blindness occurring. The birds developed a great liking both for the berries and the white flower when it fell. As far as I know the berries contain no poisonous properties. They are slightly aperient and a diaphoretic. Most of us have tasted elderberry wine, which is perfectly harmless, and I have met some people who liked it. It seems hardly possible that a duckling would eat the berries of the deadly nightshade. Belladonna will cause long-continued and excessive dilation of the pupil of the eye, but not, so far as I am aware, blindness. It is very possible that the blindness was caused by feeding a sticky mash, and the water vessel was not deep enough for the duckling to clean itself. Of course, there may be another cause—cataract.

SINGLE COMB WHITE WYANDOTTES AND LEGHORNS.

Mr. J. Wilson, writing in reference to the above cross, says:—

> "The question is frequently asked, through 'Eggs,' as to the advisability of mating single comb White Wyandotte cockerels to White Leghorn hens. This is, indeed, a very bad cross, as I have tried it; but if you reverse the order of things, and mate a White Leghorn cockerel to single comb hens, you will get an excellent layer, especially in winter, but 50 per cent. will be broody in spring. I have tried this both ways, and the latter is the best."

The comb itself would, of course, not affect the value of the cross either way, and yet, as Mr. Wilson says, there is often an enquiry as to its value. We really should know what is likely to happen, when we make a cross. So many people do it to see what will happen. One thing is very certain, that if a cross is made between a light and a heavy breed, the male should always be of the light breed; it always results in better egg production and larger birds than if the reverse cross is made.

APPLICANTS FOR MEMBERSHIP.

Glass, L. G., The W. A. Jenkins Co., Ltd., 359-363, Ridout Street, 41-47, King Street, London, Canada.
Inman, C. N., 21, North Drive, Shortstown, Bedford.
Yorkston, John, Thorntonhall, Nr. Glasgow.
Sketchley, A. J., May Cottage P.F., Oakleigh Road, Whetstone, N.20.
Taylor, H. L., Alba-cot, Gerrards Cross, Bucks.
Mellor, Mrs. W., The Knoll, Conway, N. Wales.
Field, H. P., The Croft, Walsall Road, Aldridge, Walsall.
Shanks, Miss G., Hallyards, Meigle, Perthshire.
Jones, P. C., Sunny Bank, Wells Green, Wistaston, Crewe.
Lansley, Mrs. A. E., Woodside Villa, Station Rd., Wootton, I.O.W.
Hartle, E., 10, Victoria Road, Barnetby, Lincs.
Forrest, A., Pike Stone Bark, Heptonstall.
MacColl, Mrs., Barrowby, Kirkby-Overblow, Harrogate.
Garland, A. H., Upton, Acle, Norwich.
Collett, A., "Houblon," Ninfield, Battle.
Barlow, L., Fron Deg, Meliden, Prestalyn, N. Wales.
Crump, Miss L., Cuddington, Malpas, Cheshire.
Stark, J. L., Noak Hill P.F., Billericay, Essex.
Blundy, S. R., South Bush Lane, Rainham, Kent.
Worley, Newnham, 180, St. Leonards Road, East Sheen, S.W.14.
Noakes, C. W., 11, Sundown Road, Leicester.
Brown, A. E., Guildford Farm, Havenstreet, Isle of Wight.
Harding, Miss A., Sheepwash Farm, Burghclere, Nr. Newbury, Berks.
Bailey, J. L., Lake House, Salisbury, Wilts.
Dewhirst, Miss C. R., "Wheatley," Copthorne Rd., East Grinstead.
Lawton, S. H., 31, St. Clement's Road, Chorlton-cum-Hardy, Manchester.
Smith, A. E., Wootton P.F., E. Chiltington, Nr. Lewes, Sussex.
Craig, Miss M. W., The Island Rd. Tea House, Upstreet, Canterbury.
Gonville Poultry Farm, Smallfield, Nr. Horley, Surrey.
Cook, G. F., "Hynton," Central Avenue, Rochford, Essex.
Thomas, A. B., "Silverdale," Cranleigh, Surrey.
Dugue, E. J., The Cottage, St. Saviours.
Johnson, H. G., Kia-Ora, Barnt Green Rd., Rednal, Birmingham.
Williamson, R., 41, Smith St., Ryhope, Nr. Sunderland.
Bushell, G., Mutrix P.F., Westgate-on-Sea, Kent.
Brooks, E. G., 31, Trafalgar Rd., Birkdale, Southport.
Barrie, J. H., Ashfield, Rutherglen, Glasgow.
Patten, Lt.-Col. G. R. B., Glan Hafod, Old Colwyn, N. Wales.
Reay, F. W., Westfields Farm, Alvechurch Rd., West Heath, Northfield, Birmingham.
Crawford, V., "Glenview," Lower Castlereagh, Belfast.
Scott, J., Crawness, Clephanton, Anstruther, Fife.
Walker, Miss D. M., California, The Parks, Southwell, Notts.
Wood, Mrs., Bank House, Little Salkeld, Carlisle.
Flood, Mrs. R. E. Solly-, The Old Rectory, Little Berkhamsted Hertford.
Love, Mrs. K., Walcot, Norwich, Norfolk.
Barrett, E., Well Head Farm, Sowerby, Nr. Sowerby Bridge, Yorks
Kirk, R. J., Antrim, Ireland.
Laurie, W. E., Beeches, Faygate, Sussex.
Gray, H., Fairfield P.F., Harroway Rd., Andover, Hants.

ANSWERS TO QUERIES.—Continued.

E. M. G. M. (Dervock, Co. Antrim). As you have examined the throat, and can find no trace of cheesy growths, and there is no running at the nostril, I think the trouble must be due to bronchitis. It is advisable to feed principally on bread or middlings moistened with milk, and to this add two or three drops of cod liver oil. Keep the birds in a warm, dry place, and they should recover.

J. A. B. (Hollow Meadows). There is far more bone than meat in the sample of meat and bone meal, and I don't consider it good value. Bran is fair value for money, but the middlings is a very moderate sample. The maize is good; the ground oats are not Sussex grounds and I don't call them good value at 15s. 9d., as the quality of the oat is poor.

W. L. F. (Burnley). I would have thought the Buff Rock more suitable than the Buff Orpington for the exposed position of which you write. However, you have made your choice. A good wet mash would be:—Bran, 1lb.; Thirds, 3lbs.; Sussex Ground Oats, 1lb.; Maize Meal, 1lb.; Meat and Bone Meal, 1lb. It will make no great difference whether you give it them night or morning, but let them have a good 2½ ounces per head weighed before scalding. The best grain feed would be kibbled maize. I would not feed oats in such a position at this season.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION,

LIVERPOOL AND DISTRICT BRANCH.

1925 REPORT (EIGHT MONTHS).

Fifty-nine members have at various times taken advantage of the supply of foodstuffs from Messrs. B. Sykes and Sons, Ltd. There have been no complaints

The total orders for foodstuffs for the eight months amounted to £1,055 5s. 6d. This gives an average of £131 18s. 2¼d.

In March Mr. F. Walsh, of the Glen Poultry Farm, Hoghton, gave a paper on "**Chicken Rearing and Selection of Eggs for Incubation,**" and he also judged a fine selection of eggs in the egg show. Unfortunately the egg show was very poorly supported.

The Statement of Accounts show the finances of the Branch are in a most satisfactory condition. On the eight months' working there is a balance of £23 5s. 10d. This added to £32 7s. 10d., the balance brought forward from last year, gives a total of £55 13s. 8d.

ACCOUNTS AND BALANCE SHEET for Eight Months ending 31st August, 1925.

PROVISION ACCOUNT.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Purchases	1028	17	11	By Sales	1055	5	6
,, Discount	26	7	7				
	£1055	5	6		£1055	5	6

INCOME ACCOUNT.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Postages and Telegrams	1	6	2½	By Subscriptions	5	5	0
,, Stationery and Printing	1	10	2½	,, Subscriptions forwarded to Parent Society ...	1	12	6
,, Cheque Book	0	2	0	,, Sale of Badge	0	1	0
,, Hire of Hall, etc.	2	7	0	,, Provision Account	26	7	7
,, Subs. forwarded to Parent Society	1	12	6	,, Entries at Egg Shows	0	9	0
,, Prizes at Egg Shows	1	5	0	,, Advertisements	0	3	0
,, Lecturers' Fees	2	2	0				
,, Sundries	0	5	0				
,, Bank Charges	0	2	4				
,, Balance	23	5	10				
	£33	18	1		£33	18	1

BALANCE SHEET as on 31st August, 1925.

Dr.	£	s.	d.	Cr	£	s	d.
INCOME ACCOUNT—							
Balance last Account	32	7	10	National Provincial Bank, Ltd., Aintree Branch ...	55	13	8
Balance this Account	23	5	10				
	£55	13	8		£55	13	8

Audited and found correct.
Dr. J. P. HALL,
R. J. ROWLEY. 25th September, 1925.

The Sixth Annual General Meeting of the above Branch will be held in the Albany Room, Palatine Cafe, Lord Street, Liverpool, on Saturday, 10th October, 1925, at 6.45 p.m. prompt.

Mr. William Hamnett, N.P.C., S.P.B.A., Myrtle Poultry Farm, Blackpool, will also give a paper at the meeting on "**Winter Egg Production.**"

The Hon. Sec will be in attendance at 6 p.m. to receive subscriptions.

AGENDA:—

1. Read Notice convening the Meeting.
2. Read Minutes of last Annual Meeting.
3. Receive Report for the eight months ending 31st August, 1925.
4. Elect Officers for coming twelve months
5. Any other business.

Will members please note that those who have not paid their subscriptions by the 15th October, will not have their names printed on the New Membership Cards.

R. J. THOMAS,
9, Grey Road, Walton, Liverpool, Hon. Sec

ANNUAL GENERAL MEETING.

Dear Mr. Newman,—I am sorry to note a resolution is to be put to raise the subscription from five shillings to ten shillings per annum, for nothing could do more harm to the interests of our Association.

We know members obtain wonderful value, but we must remember there are a great number to whom the finding of even five shillings is a consideration, and as the Society is in such a sound financial state, why should we embarass the very class for whom the S.P.B.A. was chiefly formed? By some means let us help on the good work of the N.P.C., other than attempting an increased subscription—that would be a fatal mistake.

Yours very sincerely,
T. J. WAINWRIGHT.

LEG WEAKNESS—A PREVENTION.

(Continued from next page.)

and scratch in those rocky hoppers (the sides of which are so steep that the mash does not get much scattered), and yet they eat up everything and the hopper is bare!

I should add that I have used all kinds of brooders, heated by lamps, hot water, etc., as well as cold brooders, and I cannot think of any other reason why I, who have suffered from most trials which befall a poultry-keeper (here I know Mr. Newman would bear me out), should so far be immune from leg weakness, unless this form of artificial exercise has prevented it.

Leg Weakness. A Prevention.

By NORAH SEDGWICK.

Whenever I read in "Eggs" of the sorrow of those breeders who are troubled with leg weakness, or come across an article dealing with cures and preventions, I want to contribute my views on the subject.

In breeding season, time is lacking; in autumn we are looking forward to the future. So, for what it is worth, I retail my experiences.

For more years than I care to count I have kept poultry, always "con amore," often in fairly large numbers.

I have had quite my share of disappointments and failures—many due to my own fault—some to circumstances, but whenever I begin to "count my blessings" (a thing we poultry-keepers don't often do!) first and foremost I put the fact that I have never suffered from leg weakness. Four years ago, when in charge of some 2,000 chicks, I did have one mild attack among one lot of 100, due to the fact that chicks were in asbestos brooders with hovers, the weather was vile, and this lot stayed too much in the inner chamber with not enough earth on floor. The conditions were changed, and the plague ceased.

Now for my theory! Being also an ardent gardener with a passion for weeding, I used years ago to throw down my weeds to the chicks—noticing how much pleasure and, incidentally, exercise they got from scratching in those weeds. It became a rule to provide the amusement daily, until gradually I have evolved a regular system of rock gardens for them, which amuse the outsider who notices them, but I really believe give the chicks in a very limited space the varied use of legs, toes, etc., which makes for a healthy, sprightly chicken. Odd bits of brick and stone provide dry mash hoppers in corners of the day nursery—the higher and rockier the sides, the better—a heap of hay somewhere is a constant source of amusement, and provides a cosy sleeping place in the day-time. The water saucers are on the top of a miniature hillock, and weeds of all kinds (with wet earth attached) with a little coal dust as a "bonne bouche," keep the inmates happy and occupied in the worst weather.

This season several broods of 60 to 80 chicks never went out of doors till 10 to 15 days old, and in 1,100 chicks raised the percentage of deaths from January 6th to May was 12½, including accidents.

I am also grateful to Mr. Newman's mash, for I look upon it as an incentive to scratching! Is it the precious grains of linseed meal for which they hunt so long? I am never sure, but they scratch

(Continued at Foot of Previous Column).

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, OCTOBER 2nd, 1925.

GRAIN AND FEEDING STUFFS.—British wheat supplies are full, but a very dull inquiry is experienced and quotations are decidedly lower, the average being about 10s. 8d. per cwt. against 11s. 4d. last week. English malting barley shows a much easier tendency, only a quiet inquiry being reported, while grinding samples also move slowly at less money. A moderate business passes for best white oats, but average prices have declined for both whites and blacks, although recent rates have been held for the former at London. White and black oats average 9s. 9d. and 9s. per cwt. respectively.

Imported wheats are scarce on spot at Bristol but are freely offered elsewhere, and business continues to be dull with further price reductions. Imported barleys are mostly offered at about 6d. to 10d. per cwt. less money, while foreign oats fail to hold their price, as a rule. Liberal arrivals of maize sell at lower rates, the demand being only moderate.

Millers' offals are steadily inquired for, although bran is a shade easier at London. Maize meal is cheaper all round, and other meals are in quiet demand and inclined to favour buyers, except fish meal, which is firm in price owing to scarcity. Trade in oil cakes remains quiet and prices tend to be easier.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull, £6 17s; Liverpool, £7 5s; London, £7 2s. Broad Bran: Bristol, £8 17s; Hull, £8 7s; London, £8 10s. Middlings—Fine (Imported): London, £9 7s; Coarse (British): Bristol, £9 7s; Hull, £9 5s; Liverpool, £9 5s; London, £8 15s. Pollards (Imported): Bristol, £7 10s; London, £7 5s. Rice Bran: Bristol, £7 17s; Liverpool, £7 5s. MEAL.—Barley Meal: Bristol, £10; Hull, £11 8s; London, £10 7s. Maize Meal: Bristol, £11; Hull, £10 8s; Liverpool, £10 17s; London, £11 5s. Maize Meal (S. African): Bristol, £10 5s; London, £9 15s. Maize Germ Meal: Hull, £10 10s; London, £10. Maize Gluten Feed: Bristol, £11 15s, London, £9 17s.

EGGS AND DEAD POULTRY.

Eggs continue scarce, and although trade is quiet prices for nearly all descriptions record increases. Dead poultry is in good supply and values have a weaker tendency.

Week-end Prices—Eggs (per 120): British, 24s 0d, 18s 0d; Irish, 22s 6d, 22s 0d; Danish, 22s 3d, 21s 6d; Dutch, 23s 3d, 22s 3d; French, 21s 9d; Belgian, 21s 6d, 20s 6d; Italian, 18s 9d, 17s 9d; Lithuanian, 16s 6d, 15s 6d; Polish, 13s 0d, 12s 3d; Chinese, 13s 9d, 12s 9d; Russian, 15s 0d, 12s 9d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d. 1s 4d; Irish, 1s 3d, 1s 0d; Others, 1s 5d, 1s 1d. Ducks, 1s 3d, 1s 1d. Geese, 1s 2d, 10d.

EGGS.

Per Doz.—Ashford: First, 2s 7d; Second, 2s 4½d. Birmingham: First, 2s 2½d; Second, 2s 0d. Bridgwater: First, 2s 9d; Second, 2s 7½d. Chelmsford: First, 2s 6d; Second, 2s 4¼d. Colchester: First, 2s 8½d; Second, 2s 2½d. Doncaster. First, 2s 4d; Second, 2s 3d. Dorchester: First, 2s 8d; Second, 2s 6d. Exeter: First, 2s 6d. Hereford: First, 2s 3d. King's Lynn: First, 2s 4d; Second, 2s 2d. Llandilo: First, 2s 4d. Mold: First, 2s 6d; Second, 2s 4d. Newport (Mon.): First, 2s 9d; Second, 2s 6d. Norwich: First, 2s 3d. Oswestry: First, 2s 10d; Second, 2s 9d. Penzance: First, 2s 1d; Second, 2s 0d. Saffron Walden: First, 2s 8½d; Second, 2s 5½d. St. Ives (Hunts): First, 2s 3d; Second, 2s 1d. Salisbury: First, 2s 8½d; Second, 2s 7d. Skipton: First, 2s 3d. Truro: First, 2s 1d. Welshpool: First, 2s 4d; Second, 2s 1d. *Carlisle: First, 3s 0d. *Derby: First, 2s 6d. *Ipswich: First, 2s 6d; Second, 1s 9d. *Lincoln: First, 2s 3d. *Shrewsbury: First, 3s 0d; Second, 2s 9d. *York: First, 2s 9d.

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 4d. Hereford: First, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 5d; Second, 1s 3d. Newport (Mon.): First, 1s 6d; Second, 1s 2d. Truro: First, 1s 4d. Welshpool: First, 1s 4d; Second, 1s 2d. *Derby: First, †5s 0d; Second, †3s 6d. *Ipswich: First, 1s 6d. *Lincoln: First, †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 0d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 1s 0d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 6d; Second, 1s 4d. Welshpool: First, 1s 2d; Second, 1s 0d. *Derby: First, †4s 6d; Second, †3s 6d. *Ipswich: First, 1s 4d. *York: First, †6s 0d; Second, †5s 6d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, October 7th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

THE ANNUAL GENERAL MEETING WILL BE ELD IN THE COUNCIL CHAMBER AT THE OLBORN RESTAURANT, ON WEDNESDAY, CTOBER 21st, 1925, AT 4.15 P.M. MEMBERS RE EARNESTLY INVITED TO ATTEND AS IATTERS OF CONSIDERABLE IMPORTANCE 'ILL BE PRESENTED FOR THEIR CONIDERATION.

MEMBERS ARE ESPECIALLY REQUESTED O NOTE THAT UNLESS THEIR SUBSCRIPIONS ARE RECEIVED PRIOR TO OCTOBER 0th THEIR NAMES CANNOT APPEAR IN THE IST OF MEMBERS PUBLISHED IN THE NNUAL REGISTER.

TO OUR READERS.

THE DAIRY SHOW ISSUE OF "EGGS" THIS YEAR WILL BE OF ESPECIAL INTEREST, AND WILL CONTAIN REVOLUTIONARY IDEAS REGARDING HOUSING.

IT WILL ALSO CONTAIN PLANS OF A TYPE OF HOUSE WHICH WILL BE OF THE GREATEST INTEREST AND ECONOMIC IMPORTANCE. IT WILL ONCE MORE DEMONSTRATE THAT THE S.P.B.A. LEADS THE WAY.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of ' Eggs," it is imperative that new advertisements nd alterations are received by FIRST POST ON 'RIDAY MORNING to ensure insertion in the ollowing Wednesday's issue. It is hardly necesary to add that the earlier in the week we receive opy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

We frequently receive complaints from our readers to the effect that when replying to advertisers, letters are often returned owing to the address given in the advertisement being insufficient. For the sake of both our readers and advertisers, we would therefore ask every advertiser to have as full an address as possible inserted in all announcements.

Classified Advertisements.

(PREPAID RATES.)

1d. per word—minimum charge, 1s. 0d.; 13 insertions at price of 12. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS,	per line, extra 9d.		
DAY-OLD CHICKS,	„	„	1s.
DAY-OLD CHICKS	„	„	1/6

The number of letters, punctuations and spaces between words should be totalled, when the following table will be of assistance:—

9d. size allows for Thirty-one to one line.
1/- size allows for Twenty-seven to one line.
1/6 size allows for Twenty-one to one line.

When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

N.B.—Advertisements, unless accompanied by correct amount, will not be inserted.

Advertisements must be distinctly marked with the Heading under which they are to appear.

Advertisements must be written on a separate sheet of paper, and one side of the paper only.

Name and Address to be counted. In the case of a Box Number being used, the words. "Box," "Eggs," 94, Farncombe Street, London, S.E.16, to be counted as eight words, i.e., making a total extra charge of 1s. 8d. (1s. for Box; 8d. for address) per insertion.

Advertisements must reach this office

FIRST POST FRIDAYS

for insertion in the following Wednesday's issue. Those received after this time will be inserted in the **next issue.**

PLEASE WRITE CLEARLY, and TO AVOID MISPRINTING OF STRAINS, NAMES AND ADDRESSES, THESE SHOULD BE WRITTEN IN PRINTED CHARACTERS.

Displayed Advertisements.

Ordinary Page, £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 9d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Positions by arrangement. Discounts for Series. Full Scale of Advertising Rates on application.

Advertisements, addressed to Mr. S. H. **BURLES, "EGGS," 94, FARNCOMBE STREET, LONDON, S.E.16, MUST REACH US BY FIRST POST FRIDAY MORNINGS,** for insertion in following issue. Those received later will be inserted in the next issue.

A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to The Beeches, Rudgwick, Sussex.

EGGS.

FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C., Longwick P.F., Princes Risborough, Bucks. R.I. Reds, Eggs, Chicks, and Stock Birds. List free. Satisfaction insisted on. (See under Ducks and Drakes also).

YOU WANT—

No morning work
No heating water
No measuring
No mixing
No dirty dishes
No trouble
No worry

BUT MOST EGGS—
AND SURE PROFITS

For complete information on this most vital subject write for your copy of the Ful-O-Pep Handy Monthly Guide, the most valuable book on Incubation, Rearing and Poultry Husbandry.

FUL
TRADE **-O-** MARK
PEP
5

POULTRY MASHES

NO MIXING. NO HEATING WATER: NO TROUBLE

The Ful-O-Pep Guide has detailed suggestions for every month in the year, also 12 monthly egg charts for you to record your eggs. Sent free and postage paid.

Ful-O-Pep Poultry Feeds are made and guaranteed by Quaker Oats Ltd., 11, Finsbury Square, E.C. 2.

EGGS.

FOR SALE.

Light Sussex Eggs for hatching; Cooks' direct, mated to Slade's Cock 7s. 6d. dozen.—Miss Gregg, Little Kent.

Eggs for Early Spring Chickens fo livery in October and November: R. Sussex, Sussex x Wyandotte, Wyand R.I.R. 7s doz.; 50s., 100. Chicks b double above prices.—Wilkinson, lands P.F., Heysham.

LIGHT SUSSEX EGGS for HATCH Also Red and Brown Sussex, now for spring chicken trade; big hens. State requirements. Quotatio return.—Hodges, Heathfield.

EGGS FOR SPRING CHICKEN
Dr. Harbord (winner, 1st Bath and Table Fowl) is now booking orders f livery October onwards; £3 per 100; for 15. No replacements. From his S Light Sussex and R.I.R. Pens; noted stamina, size and quality.—Detling, stone.

55/- PER 100.
Limited number Light Sussex Egg early Table Cockerels; 200 typical mated to produce "bone." Book earl avoid disappointment.—Holt, Hadlow Sussex.

EGGS AND CHICKS.

FOR SALE.

Table Poultry. Now booking orde Eggs, from Special Table Crosses for S Chickens; 7s. 6d. dozen, £3, 100: unfe replaced.—Simmins, M.S.P.B.A., Heat Sussex.

DAY-OLD CHICKS
FOR SPRING CHICKEN.
Pure Light Sussex and White dottes; 12s., dozen: £4 10s., hundre Martin Gray, The Chestnuts Poultry Longlevens, Gloucester.

PULLETS.

FOR SALE.

Cockerels, Pullets, and few Adul practically all breeds (including imp American Turkeys) for Sale.—Edwar Cass, Manager, Mill Poultry Halesowen.—My Name is a guarante reliability of stock.

Frank Snowden's "Daily Mail" White Leghorns; expensive parents. Pullets, March, 1925; superb quality each. Six February, commenced la 11s. each. Cockerels, 15s.-20s. each. Se won prizes.—Harry Whiteoak, The Gr Kildwick, Keighley.

We continue to receive repeat order Pullets. Further enquiries invited.— and Bacon, Arle Poultry Farm, Ch ham.

Light Sussex (Rothschild's), (Measured) Pullets, March and hatched; from 10s. 6d. each.—Cot Po Farm, Hurstpierpoint. Sussex.

Barnevelders. Pullets, Cockerels, ing Pens for sale; closely related t winners of 42 prizes, numerous specials this season (mostly utility cla —Mrs. Manwaring, "Plovers," Horsmo Kent.

WHITE LEGHORN PULLE
Fifty Pullets, hatched mid-April; Ha strain; crossed Misses Ranford Cock 10s. each, f.o.r.—Lynn and O'Reilly. K fold Poultry Farm, Billingshurst, Sus

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH.)

egistered at the G.P.O. as a Newspaper.
ol. XII. No. 16. Copyright.

Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months " " 6/4
Three Months " " 3/3

"GLOSTER PROMISE."

Gold Medal Winner (Single Pen Section), Five Counties Laying Test, 1923-24, with 265 first grade eggs in 46 weeks. 2½ oz. weight.

Best Individual Leghorn in Test.

Complete Record—300 in 12 months: 342, 14 months. 180, 2nd year to date.

No. 231.
299, 13 months.
176, 2nd year to date.
2¼ to 2½ oz. weight.

No. 200.
290, 13 months.
177, 2nd year to date.
2¼ to 2½ oz. weight.

Three Daughters of "Pensford Promise," 590—2 years.

"Pensford Promise's" 18 Daughters have an average of 269 Eggs.

Bred and owned by

The Misses Ransford,

Perseverance Poultry Farm, Pensford, near Bristol.

PRIEST and SHAW

Wyandottes ✦ UNDER ROYAL PATRONAGE ✦ Leghorns
I.O.W.
ALWAYS WINTER EGGS

LAYING PULLETS
FOR SALE.
Order NOW and secure Winter Eggs.

WRITE FOR OUR PRICE LIST.

SANDOWN, - - I.O.W.

SECURE
BLOOD-TESTED STOCK
NOW!
FROM
John H. Dowden & Son.

We have a number of individually recorded hens in our five varieties,

W.L., W.W., R.I.R., L.S., and B.L.,

also a few stock cockerels, bred from individually recorded and progeny-tested hens. Write for our illustrated catalogue without delay, and secure the pick of these birds NOW.

JOHN H. DOWDEN & SON,
"Heydown," Heathfield, Sussex.

The 'Eclipse' Poultry Houses

WITHOUT THE SLIGHTEST DOUBT THE VERY BEST HOUSES EVER MADE.

MAINTAINING THE STOCK IN TIP-TOP CONDITION AND CONSEQUENTLY ENSURING HIGHEST PRODUCTIVITY.

No II. 60 ft. x 12 ft. (six section), supplied to Mr. J. H. McInnes Skinner, Bramerton Grange, Norwich, who, when placing further orders, writes:—

"I have several customers coming this week to see your house, and hope I may be able to get you some orders. I should like to assure you how highly I appreciate the excellence of your house and granary. I do not believe that the former can be beaten either in design, workmanship, or construction. The house is beautifully airy and perfectly ventilated, and embodies every feature that goes to make the perfect poultry house. There is nothing shoddy or second-class in it. The granary is splendidly built, thoroughly strong and substantial. I heartily congratulate you on them both."

Full particulars from the maker—

HERBERT W. MARTIN, Perivale Poultry Farm & Appliance Works,
EAST HARLING, ATTLEBOROUGH, NORFOLK.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, OCTOBER 14th, 1925.

Editorial.

UTILITY BREEDERS AND TYPE.

We find the following in the editorial columns our excellent contemporary, "The Poultry-an," and we take this opportunity of congratulatg the staff on the completion of the first year of existence, and wish it continued success:—

"It has been our good fortune to attend a number of Agricultural Shows during the last few months, and to study critically the birds in the Utility Classes which have taken cards.

Frankly, we are afraid that, just as at the start of utility judging, too little attention was paid to type, so now the pendulum has swung too far in the other direction. A matter ot this sort must always be more or less a matter of individual preference, dangerous to criticise in cold print. Yet the feeling is growing up among utility breeders, that the birds that stand most chance under certain judges in the utility classes are those not quite good enough to appear in the exhibition cages.

We prefer to put it that way than to call them exhibition culls.

At show after show we saw the cards going to Leghorns and Wyandottes, which, frankly, no utility man who knew his job would look at twice. Big, beefy, leggy, fellows, which could do everything except lay fast enough to leave just a little over when the corn bill has been paid.

That such birds as these should get away with the money is not in the best interests of the poultry industry. Type we must have, but if type is the only thing to count, then why have utility classes at all?"

Echo answers, "WHY?" It is not the first ne we have heard this complaint. The improved our which is to be found in the utility classes Rhode Island Reds has, to a great extent, been ined at the expense of those points which licate high egg production. Certainly the lges deserve our sympathy, for the difficulties very great. A Red should be a Red and not Buff, and we expect a Wyandotte to be a Wyandotte and not a White Rock with a rose-comb. These utility shows were heralded as being of the greatest educational value, and for this reason we expect utility characteristics to be the points on which the birds will be judged. If type and colour are to be the deciding points, then we may soon expect to see the end of the utility shows. By-the-bye, what an excellent rule it would be if it could be enforced, that the exhibitor should be the actual breeder of the bird he exhibits. That would mean fair competition. There must be a poor satisfaction in buying to win, although, of course, the idea in most cases is the advertising value of the win, but such people hardly deserve the name of fanciers or sportsmen.

"Big, Beefy, Leggy fellows"—it seems incredible that cards should be awarded in the utility section to birds so described. If we did not know that the writer was thoroughly capable of judging, we should hesitate to repeat his remarks. We gather from what he has said that the exhibition-bred bird not quite good enough for the shows is winning in the utility classes. We heard the same opinion expressed at the Dairy, Palace, and Olympia last year, and were inclined to think that was the case with the Reds, and in one instance with Wyandottes. What will be the end of it all?

SMALL FLOCKS AND OTHER THINGS.

Interesting in the extreme is the report of the Instructors Convention at Manhattan, by Mr. Edward Brown, published in our contemporary, "Feathered World," last week. Mr. Brown reports that it is being realised on commercial plants, flocks should not exceed 200 in number, and that range must be much greater than at present, and at intervals fresh ground must be given. We have always advocated the small flock system, contending that the most economical unit is the 100, and that the problem of labour has been enormously over-estimated. Confirmation of this opinion now comes from the land of big things. Small flocks mean less risk of disease, control of it when an outbreak occurs, reduction in the number of duds carried in any flock, and in some at the present moment the percentage is very much higher than is generally realised; lower percentage mortality among chicks, and a general raising of the whole standard. A return to smaller units would result in a general improvement in the health and production of the whole of the commercial flocks in this country.

Mr. Brown reports a growing feeling that line-breeding has been carried too far, and many are finding it necessary to out-cross in order to counteract the tendency to smaller or more delicate bodies and to the loss of size and quality in eggs.

We have long ago pointed out that line-breeding was a mistaken policy as far as egg production is concerned. The system was followed under a misapprehension, or a failure to recognise that high fecundity is the result of selection and not of breeding in line. Much mischief it has done, but the argument in favour of line-breeding is so plausible.

We take the following from the "New Zealand Poultry Journal," which is full of good things each month. Many of our readers were fortunate enough to make the acquaintance of the Editor, Mr. J. B. Merrett, and Mrs. Merrett, when they came over, and if they wish to see a copy of the journal, they should address a letter to the Editor, P.O. Box 588, Christchurch, N.Z. To proceed, the extract is as follows :—

> "The writer knows of competition winners that were bred from a mother and son mating and father and daughter combination, and he heard—and believed it to be true, knowing his man—that in another case the winners came from a brother and sister mating. You don't believe it? All right. Just ask yourself if you have ever seen stronger birds, year after year, than the sparrows. Well, who supervises their business so that close relatives can't breed together? No one, of course. As a matter of fact, the breeding must be, and is, in every kind of combination. But only the strongest birds do the breeding. The others are knocked out of the business, and the hens will have nothing to do with them. The Wyckoff way is set out in the following extract from 'The Reliable Poultry Journal' of April, 1925:—'Later, however, Mr. Wyckoff did a bold thing, as one rightly may style it. Finding it difficult to obtain male birds in those days that had been bred by selection or otherwise specially for egg productiveness, he adopted promiscuous or indiscriminate in-breeding—that is, the use of selected males from his own strain and flock, which birds he bred back to the hens and pullets, including their own mothers and sisters, doing this without any possibility of definite knowledge as to actual relationship between individuals. In adopting this plan, however, he took pains to select only quick-maturing, healthy, vigorous cockerels of good body shape, and other 'external characteristics,' as he called them at that early date, and in all cases he retained for use as breeders only such cock birds as continued to show, in superior degree, the qualities he believed a breeding male should possess."—"Hardshell."

There is not the slightest reason for not believing that the progeny of these close matings were competition winners. What the writer does no appear to understand is, that the result was no due to the close mating, but to the selection o superior individuals. Had there been any weakness, it would have manifested itself with fa greater intensity in the progeny, and it would hav been said, "This is the result of line-breeding," which would have been equally wrong. The ol example of the sparrows is trotted out again. I is totally foreign to the subject. Moreover th writer is wrong in saying Mr. Wyckoff adopte promiscuous or indiscriminate in-breeding ; he di nothing of the sort, for he bred with selecte birds, "selecting only quick-maturing, healthy vigorous cockerels." What the writer appears t fail to understand is, that in line-breeding it is no the relationship that counts, it is the individua every time.

CATS ON POULTRY FARMS.

To the Editor of "Eggs."

Dear Sir,—In view of trouble caused by rats it is a wonder that cats are not included to greater extent in the plant of modern poultr farms.

A few years ago I was greatly troubled by th depredations of rats, and tried all manner o means to keep them down, but no sooner had effected a clearance than another lot made thei appearance, and the trouble continued till I ha introduced a kitten from a noted rat-killing strain In a few weeks she began to clear the farm o mice; later, found her eating young rats, and ver soon she killed or drove off all the rats there wer on the place.

Instead of bothering with traps and poisons now rely on her and one of her daughters t prevent further trouble in this respect.

C. E. TOMPKINS.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impressio that they must necessarily be scientists, pedigre breeders, or farmers on a large scale to rend themselves eligible for membership of the S.P.B.A This idea is quite incorrect. The S.P.B.A. is o to assist all grades of poultry-keepers, from th proprietor of the 10,000-hen farm to the intensivi with his dozen or so birds; all are entitled to equ benefits. The Five Shilling subscription bring with it many advantages, namely : Free Advice b Post, a Copy of the Annual Register, the Benefi of the Discount System, and many oth advantages too numerous to mention here. Yo should write for full particulars to the Secretar TOM NEWMAN, The Beeches, Rudgwic Horsham, Sussex. The financial year began o 1st September.

Scientific Poultry Breeders' Association.

uli particulars of membership will be sent by return on ipplication to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

286.

Ve beat all records last month. The total number new members enrolled was 286, and this great rease was not the result of any campaign. No eal was made, they simply came. It should be tinctly understood, , that these are full mbers. We have not liated another society, l counted those as mbers. LET ME MIND YOU ALL AIN THAT IF YOU SH YOUR NAME LUDED IN THE NUAL REGISTER. BSCRIPTIONS ST BE RECEIVED T LATER THAN TOBER 15th.

XPERIMENTAL FARM

he Committee came Rudgwick on Wedlay, September 30th, viewed three sites the proposed experiital farm. One of e was selected, and lease is being arged. The position is xcellent one. The ind, just over four s in extent, with a for extension if led, lies high with a slope to the south, it is well protected the North and t. When all arrangets have been completed I hope to be able to unce the nature of the experiments which will ade.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

Annual General Meeting

HOLBORN RESTAURANT

Wednesday, 21st October - 4.15 p.m.

THE ANNUAL GENERAL MEETING WILL BE HELD IN THE COUNCIL CHAMBER AT THE HOLBORN RESTAURANT, ON WEDNESDAY, OCTOBER 21st, 1925, AT 4.15 P.M. MEMBERS ARE EARNESTLY INVITED TO ATTEND AS MATTERS OF CONSIDERABLE IMPORTANCE WILL BE PRESENTED FOR THEIR CONSIDERATION.

MEMBERS ARE ESPECIALLY REQUESTED TO NOTE THAT UNLESS THEIR SUBSCRIPTIONS ARE RECEIVED PRIOR TO OCTOBER 20th THEIR NAMES CANNOT APPEAR IN THE LIST OF MEMBERS PUBLISHED IN THE ANNUAL REGISTER.

FOOD PURCHASE SCHEME.

portant announcements in connection with the me will be made at the Annual General Meeting. ill be worth your while to attend.

"EGGS."

e Dairy Show Issue will be the best on record—*ll be sensational.*

AN OPPORTUNITY OFFERS.

"Organisation forsooth! Merely a matter of members writing to Mr. Newman, and letting him know which part or 'job' they are willing to undertake in the scheme, and he would put the component parts in touch."

Pressure of work prevented me giving that careful attention to the article by "Heathfield" under the above title, which appeared in our issue of September 30th, which I should have done, otherwise the paragraph quote above would have been ruthlessly cut out. As it was, it escaped my attention, or I did not fully appreciate its significance.

I wonder if "Heathfield" fully understands what he has done? I have been simply inundated with letters concerning this proposal of his, and already myself and my staff are working overtime, and have far more work to do than we can cope with.

I would just suggest to "Heathfield" and others who may feel inclined to follow his example, that the burden may become greater than we can bear.

Just at the present moment I am not able to give the proposal my attention. We have the Dairy Show before us, the Food Purchase Scheme is taking up an immense amount of my time, there is the organisation of the Experimental Farm, and sundry other things all outside the routine business of the S.P.B.A. So I must ask those who have written to me on the subject to kindly be patient until such time as I am able to give the matter my attention.

As I have been invited to give my opinion on "Heathfield's" proposal, I can only say there seems no reason why it should not be worked into a thoroughly sound scheme, beneficial to all who care to take part in it—*provided they do their part.* For the present I must leave it, and will all those who have been writing to me kindly take this as a reply to their letters

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GRADING EGGS—IS IT WORTH WHILE?

I have so often heard from members who complain that grading is not worth while, that if they send their eggs to the local market they are all sold at the same price; that it is of interest to record the other side of the question. A member called on me last week, whose eggs are sold by auction at his local market, graded in the following manner:—

13½ dozen mixed, weighing 2¼ozs. or over.
7 dozen, all brown pullets, weighing 1.5/8 1¾ozs.
11 dozen, all brown, weighing 2ozs.

The first lot, mixed brown and white, realised 3s. 4d. per dozen.

The second lot 3s. per dozen.

The third lot 3s. 3d. per dozen.

These eggs were sold by auction. It must be understood that the breeder did not believe in hiding his light under a bushel. He had a good article for sale, and he let it be known; consequently there is a demand for his goods which the buyers know to be absolutely good and reliable. It is not sufficient to grade eggs and send them to an auction. You must let buyers know they are graded, and it should be stamped in big letters on the box

TO OUR READERS.

THE DAIRY SHOW ISSUE OF "EGGS" THIS YEAR WILL BE OF ESPECIAL INTEREST, AND WILL CONTAIN REVOLUTIONARY IDEAS REGARDING HOUSING.

IT WILL ALSO CONTAIN PLANS OF A TYPE OF HOUSE WHICH WILL BE OF THE GREATEST INTEREST AND ECONOMIC IMPORTANCE. IT WILL ONCE MORE DEMONSTRATE THAT THE S.P.B.A. LEADS THE WAY.

LIPSIA SHOW.

The 51st Grand International Poultry Exhibition will be held from 8th to 10th January, 1926, on the Show Grounds in Leipzig, organised by the Leipzig Union of Poultry Breeders. - Agent: Hans Guuthner, Leipzig-Schleussig, Paussnitzstrasse 15

The above show will again take place as in pre-war days, as an International Exhibition with a probable membership of 5-10,000, under the patronage of the Saxony Ministry of Agriculture, and that arrangements are being made to admit as many exhibits as possible, even from abroad

Particulars can be had on application to the Agent, as above.

OUR FRONT COVER.

Our readers will be extremely interested to hear that the Misses Ransford, who have farmed so successfully at Pensford, near Bristol, are removing the whole of their stock to a larger and more convenient farm at Finchampstead, Berkshire. The old name, "Perseverance Poultry Farm," is to be retained. The removal will not take place until the middle of November.

The Misses Ransford's stock has deservedly a very high reputation, for they have been particularly careful to breed for type, stamina, egg production, a size of egg.

When we use the word "stamina" we can be estimate that by the long distance layer, and th Misses Ransford have bred so many hens with th character "persistency" which have stamped the individuality upon the whole flock. Individually-br cockerels have always been one of the features of th Perseverance Poultry Farm.

Breeding is an art, and the cleverness of t breeders is never more clearly shown than when th are able to breed stock which will not only put wonderful records of production, but also to increa or even maintain body size Here, again, the Miss Ransford have bee successful.

Further, the questi of the daughters doing well as their dams. high record dam rare breeds daughters as go as herself There is difficulty in understan ing this, but it is not i possible, and so caref has the selection of t Misses Ransford sto been that many of t daughters have equalle and even beaten, th dams' high records.

On our front cover have a photograph "Gloster Promise," wh had a complete record 300 eggs in 12 mont and was the winner the Single Pen Section the Five Counties' La ing Test.

DAIRY SHOW ISSUE.

With the "Dairy Show" issue of "Eggs" w be given a supplement, which we are sure that our readers and members will heartily apprecia This is the plan of a Straw House.

A model will be exhibited on our stand at t Dairy Show, and Mr. L. G. Price, the Glouces County Council Instructor, who is responsible this very ingenious idea, will be in attendance the Thursday, from 11.30 until 12, and from 2. until 3 p.m., and will be pleased to help anyo with particulars as far as lies in his power.

The idea is certainly unique, and we can prom our readers that it will be well worth their wh to visit the Stand and see the model.

Fullest particulars with photographs will published in the "Dairy Show" issue of "Egg

Correspondence.

SEX-LINKAGE.

To the Editor of "Eggs."

Dear Mr. Newman,—Mr. Morris Hammond's letter "Eggs" of September 23rd is very interesting, pecially to those who keep the Sex-Linked Cross he vours, viz , Black Leghorn x Cuckoo Leghorn.

There is no doubt the pullets of this Cross almost, not quite, outrival in appearance, and possibly in rformance, a flock of pure-bred Black Leghorn llets. We find the cross-bred flock more even and iarter in appearance, and leg colour decidedly better.

As regards the cockerels of this cross our experience s been that they make most profitable little table ·ds, sold at 12 weeks old, and they fatten far more adily than pure bred Leghorns.

We have an excellent market for them locally, and d them in hundreds at a profit. There has been, fact, a big demand for them.

We could give particulars as to costs and profits to yone interested. Our experience has been that Legrn cockerels *can* be made to pay.

One sees the provision counters of the big food stores owded with small cockerels, chiefly from America; e can hardly suppose they are sent over at a loss. Surely the English Leghorn cockerel might compete th the American one in the food stores if a little re trouble were taken over fattening and marting.

Yours truly,
Mrs. and Miss TYLER.

EGGS BY WEIGHT.

To the Editor of "Eggs."

Dear Sir,—Re your Editorial in last week's Eggs" respecting Egg Size and Markets.

I must again bring up the old cry, "Eggs by eight," as it seems to me that markets and eggs weight go hand in hand.

I have a little plan which I think we, as a ciety, ought to try to work out; in short, this it. I think we have about 6,000 members dotted over the country, and we ought to find out w many would be willing to take in eggs from eir districts, from members or otherwise, who uld bring their eggs to them (or perhaps some uld fetch them for a small amount), then if we uld get enough "station-holders" I will call em, and I take it that many full-time members uld be willing for the ultimate benefit they uld receive, or perhaps a small sum could be arged for handling members' eggs, and a trifle more for non-members' eggs. We should then want clearing houses at convenient points in large towns for all eggs, where they could be taken daily by motors from the egg stations, and from where the retailers could get their supplies, and buying and selling prices could be fixed by us for the present at prevailing market prices; then I think it would not be long before we should see our English eggs well above all foreigners in price. But the big "IF" is, if only we could have "Eggs by weight" (wholesale only at present, if you like); we could take in all eggs as I describe, but without it, of course, the plan is unworkable, as some would bring large eggs, some small, etc., for as long as England lasts we shall never get the people who still produce the majority of the eggs, viz., the general farmer and the cottager, to grade their eggs, either voluntary or compulsory, and if the "station-holders" had their prices sent them, say every Monday morning, what they were to pay, how could they act at present, but with egg prices quoted to them at so much per lb., everything would be simple. We could have separate prices for Browns and Whites if you like, but that is all.

I am out to eliminate the higgler, the dealer, the auctioneer, and any and all of those who to-day are making more out of our eggs than we producers who do the work. Wake up, fellow-members, and, in particular, those who are in the business for a living, and see if we cannot do something for our mutual benefit. I am willing to be one, so roll up and open the road for S.P.B.A. eggs to be on sale all over the country.

"FULL TIMER."

THE MOULT.

To the Editor of "Eggs."

Dear Mr. Newman,—You have certainly opened an interesting subject of discussion by your Editorial article on The Moult and Egg-production.

Does the relationship between moulting and egg-production vary in the different breeds?

One is inclined to think the Wyandotte lays on till the moult is well established, and she has lost most of her feathers, sometimes even laying on right through the full moult.

The Leghorn, we have found, never does this, but generally ceases to lay one to two weeks before commencing to drop her feathers, and we have never found a Black Leghorn, at any rate, to lay through the moult.

Birds very rarely stop laying in an early summer moult when brought on by heat, and we have observed they will lay on through quite a heavy moult, provided the wing-flights are not shed. If these are dropped, the bird invariably ceases laying.

Yours truly,
Mrs. and Miss TYLER.

Modern Poultry Feeding.

By **TOM NEWMAN.**

UNDERFEEDING.

Examination of the pullets in most flocks at the beginning of September will generally show a percentage of long, lanky individuals, with small bodies, rough feather and pale faces. These birds may have naturally poor constitutions, and poor powers of assimilation. If such is the case they are better killed and burned. When this advice is given, letters come in which the writers dwell on the cost of rearing to this stage, and ask if nothing can be done to make these birds profitable. The answer is, NOTHING, in big bold type, and they should not have been reared to this stage, because it should have been apparent to the owners that they were not worth rearing. That is where observation comes in. There are others who exhibit the same characteristics, and in their case the trouble may have been due to bad brooding, overcrowding, insect pests, etc. It will be wiser to get rid of them at once. However well you may feed and house them, they will never amount to much. Then there are those which have been underfed, not seriously so, but on a total ration which has been hardly sufficient for development. The legs of these birds appear long, because the body is so small, the feather is a bit rough, because it is badly nourished, but otherwise they are not unhealthy looking. They have not that yellow appearance which is to be found in other lanky individuals, which have poor powers of assimilation. It is difficult to make up for the period when these birds have been underfed, the only thing to do is to give as much highly nutritious and easily digestible food as they will consume. My experience has been that milk is of little value to birds over twelve weeks old, and the most effectual means of getting them along is to add 2 per cent. cod liver oil to the mash. Bulky foods should not be given, as the appetite is too easily satiated.

With reference to feeding maize heavily after May, which I have so often advised in these columns to keep the birds in production and to check the decrease in the size of egg which is generally perceptible then; I have received the following letter from Mr. Hood, of Kirkcaldy:—"I have to thank you for the advice to feed maize heavily after May. During the last three years I have done this with success, and this autumn I have fed the last feed split maize in troughs, and the egg yield is exceedingly good."

Several readers have written to the same effect, but one so continually gets letters asking how to feed for spring, summer, and winter. Then a members sends me a report of a lecture delivered in the North, in which the lecturer advised
audience to feed a ratio of 1 to 4 in the sumı
and 1 to 5 in the winter. It is always wiser
feed to the bird's condition and to its requireme
than to the seasons. Its requirements are larg
measured by its production, and it has noth
whatever to do with the seasons. A heavy la
will require more food in April than it will
December, because it will normally be produc
more heavily, and when it is producing so hea
it will draw on its bodily reserves if there sho
be any deficiency in the ration. Some of the m
unbalanced and unsuccessful rations which h
been sent me have been based on the albumir
ratio. Here, for example, are two ridicul
mashes, based on the albuminoid or nutritive ra
and published in a well-known book:—

5lbs. Bran, 2 Midds., 1 Clover, ½ Culms—
Ratio = 1 to 4.00.
4lbs. Bran, 1 Midds., 2 Clover, 1½ Maize—
Ratio = 1 to 4.5.

The absurdity of this is too patent to need
planation. The great bulk, the excessive amo
of fibre, the lack of animal protein, are suffici
to indicate even to the novice how ridiculous i
to talk of a balanced ration, because you are wo
ing on a nutritive ratio of one to 4 or 5.

A correspondent asks for information as to
feeding of the salt mixture frequently rec
mended in these columns, viz.: 60 parts stear
bone flour, 20 parts powdered oyster shell,
20 parts common salt. It should be underst
that this is only fed to supply deficiencies in
ration, and that these may not always oc
One would hardly expect them to do so with b
on free range, unless there was a great deficie
of lime in the soil. Its addition to the ration i
great value to the heavy producer, especially wh
large numbers of birds are run to the acre,
where they are kept intensively. It is also
great value to chicks from the shell, and is
some assistance in preventing leg weakness.
salt helps to replace the chlorine which is lost
the egg. Many of our members have written
say that its inclusion in the mash has a decide
beneficial effect upon their stock. Others h
told me that as far as they can see it has no ef
whatever. It is a question of the conditions un
which the birds are kept.

In answer to a question from Derby. The ref
from the sugar beet factories, valuable as it
be as a cattle food, is of little or no value to pou
owing to its high fibre content. My correspond
suggests that we should search round for
foods, but he does not indicate in what directi
It is easy to find new foods, but it is not easy
find one which is both useful and economical.

Reverting to underfeeding again, here is
example of how it may occur. Capt. Douglas ca
on me last week, he has been very interested

(Continued at Foot of Column Next Page).

Answers to Queries.

By the EDITOR.

DUCKS.

ev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

BODIES " for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

dies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

aders are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

plies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

L questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

B. S. (Stewarton). The ingredients used in the ash you send are of good average quality, but there much too great a bulk for winter feeding. Careful amination failed entirely to reveal any animal pro-in whatever.

A. W. (Nairn) sends sample of bran, and wishes to ow my opinion as to whether it is of good quality d suitable for poultry. Her corn merchant does not ep broad bran in stock, and assures her this quality used by the bakers in their brown loaf, and is ually as good as the other. I find among it a con-lerable quantity of husk. It is not at all a good mple, and if bakers use this for their brown loaf I ould consider it very indigestible. The sample sent not worth more than 8s. 6d. per cwt. There is not vestige of flour in it Would any of our members, o are bakers, tell me whether it is customary to d bran to brown bread? I knew that such a finely-illed flour was not used, but I did not know that bran s added. The terms "sharps" and "middlings" e very loosely used, but what are generally known "thirds" in the North are commonly called " mid-ings" in the South.

F. G M (Boar's Hill). The best method of testing gs for freshness is by candling them, the air space ing an indication as to the freshness of the egg e larger the air space the staler the egg. This is explained by the fact that, owing to evaporation, the contents of the egg shrink, and thus the size of the air space is increased.

Enquirer (Cambs.) has 120 pullets, which have been fed with grain in the early morning and at mid-day, and wet mash at night. A change is desirable, and my correspondent wants to know whether the wet mash can be fed between 12 and 2, and grain as the last feed. A change would have no bad effect on the birds, but a little discretion must be used. The mash should be given at 12, not later, otherwise it will be too near the last feed in these short days, and that should be a heavy one. The mash consists of: Bran, 4lbs., Kositos, 7lbs.; Middlings, 8lbs.; and Fish Meal, 1½lbs. "Enquirer" has worked out the albuminoid ratio, and says this method does not appear to meet her approval, although the ratio is a correct one, but she would like my opinion of it. The mash is a very good one, and should give good results, but "Enquirer" should understand that a mash is not necessarily a good one because it has the correct albuminoid ratio, or a high number of food units. It is a fallacy to believe that it is, as I have often pointed out. Kossitos would have approximately the same ratio as maize, but I have not the actual analysis with me. In answer to other questions, drakes are best away from moulting ducks. It is not a good policy to run young drakes and young chicks together.

MODERN POULTRY FEEDING.—Continued.

the advice I have given so frequently to feed more heavily after May, especially with maize. From a flock of 250 he obtained 113 eggs on August 20th, and the yield had shown a decided tendency to drop previous to that date. Watching the birds he saw that some of them were driven away by the others when feeding if there were several at the hopper, and on examining these birds he found they were invariably on the light side. As a result of this, he almost doubled his hopper accommodation, with the result that the egg yield steadily rose until it reached 147, which was the highest number obtained on any day after August 20th. Gradually production declined as the birds dropped into moult, but it was as high as 130, or over 50 per cent., on September 28th, which is remarkably good for this season of the year from 1924 pullets. I am confident that every year there are a large number of birds which are underfed, just that much which prevents their laying their full quota of eggs, and often causes the early moult. The dry mash feeder is inclined to think that because the mash is accessible all day, that the birds cannot be underfed; but if the hopper accommodation is insufficient, and it often is, there is many a bird which never gets the food it needs for production, and can only produce a percentage of what it should do. Now that the winter is coming on and the days are short and the nights long, it will be just as well to consider if hopper accommodation is sufficient.

"Yorks Moore" (Denby) sends samples of Sussex ground oats at 17s. These are good pure oats, and good value for the money. Fish meal at 22s. 6d. is also a good sample, although I have no analysis, and cannot guarantee the salt content. Clover meal at 16s. is dear, and consists mainly of meadow hay. Bran at 9s. is of fair average quality, and value for money. Indian meal at 13s. is just fair. Thirds at 10s. are only moderate, containing a lot of fine bran. Wheat is a good sample, but 15s. cwt. is a high price to pay. Maize is rather coarsely kibbled, but otherwise there is not much fault to find. The best mash my correspondent could make up with the ingredients he sends would be:—1lb. bran, 1lb. clover meal, 4lbs. thirds, 1lb. Sussex ground oats, 1lb. maize meal, and 1lb. fish meal. The grain feed should be equal parts wheat and kibbled maize, and the birds should have a good two ounces as the last feed. In answer to his other questions. Charcoal is not a necessity with adult birds. It assists in digestion by dispersing the gases which form. In chick rearing it is valuable. The best way to feed it is to obtain in a granulated form, and feed in hoppers. Grit is not necessary if the birds have oyster shell. A good sample of alfalfa meal would give better results than the clover meal, sample of which was sent. As prices go, I do not think that my correspondent is paying too much.

"Perplexed" (Preston) writes that he has a building which he used for the first time last season as an incubator house; roughly it is 17ft. x 14ft.—three windows one yard square, facing south, two east and two west. It was originally a Dutch barn, and he put a floor in half-way up, and boarded it round with 1in. flooring boards, which made a good tight job. "The chickens hatched well and seemed strong and vigorous, but gradually died off, many of them not seeming to ever look at the food." He cannot think it was B.W.D., as some of them went on all right and did well, and some which were put and reared under hens never looked behind them. The bulk of the hens went under anthracite stoves. His reason for writing is that on a hot day the thermometer in the building rose to 72 degrees, and on a frosty night went down to 40. Some of his friends advanced different opinions. One, too many windows, another wants double boarding and packing the cavity; others say it is quite all right, and a grand place. Would I advise him of my opinion? His second question is in relation to calcium salts for breeders. Could he substitute carbonate of lime for oyster shell dust? (3) What date should light and heavy breeds be hatched in the coming season to make breeding stock for 1927? (4) Apart from the protein content is there any advantage to be gained by feeding fish meal instead of meat and bone meal? (5) What are the indications of too much moisture in a hot-air machine? (6) "In answer to a query a few weeks ago you state there is a decided advantage in setting eggs under a hen the first week of sitting. Why?" (7) What are the most prominent features in distinguishing a pullet in lay and a year-old hen just through the moult and laying? "In some cases it is a very difficult proposition to me." (8) Mr. Capper, in his "One M
Poultry Farming," tells us that as a labour-savi
device the winter record of pullets is a pretty accur
guide to a twelve months' record. Does the win
months mean three months after she has laid her fi
egg, even if it be July? (9) I am feeding my birds
your formula and housing them in 100 in a flock
a 20ft. x 14ft. house, with a run of half an-acre eac
They are supposed to be bred-to-lay birds. Wh
should my flock average be? I know much depen
on Breeding, Feeding, and Management, and yo
answer will be a guide as to my management."—Th
is a very lengthy epistle. In regard to the first que
tion, I cannot understand. The variation in temper
ture in the incubator house was certainly very grea
but as it did not fall below 40, it is in so far sat
factory. What I would suggest to "Perplexed" wou
be to have blinds to the windows, and draw the
during the day, as evidently the increase in temper
ture was due to the hot sun. (2) I cannot help hi
as to the cause of the mortality amongst the chicl
as he only describes his incubator house. What
those put under the anthracite stoves? Was the
any crowding? Did they become overheated
chilled? It seems to me that the trouble arose the
In answer to his second question: Limestone du
would answer in place of oyster shell dust. In answ
to No. 3: If I wanted stock for 1927 I would hat
both light and heavy breeds in January. (4) I a
dealing with this question in the Dairy Show iss
of "Eggs." As indicated there, it will be a matt
of experiment on the S.P.B.A. Experimental Far
(5) Indications of too much moisture in a hot-
machine would be the same as those in a hot-wa
one. There would not be sufficient evaporation from t
egg. (6) An article on Incubation will appear
"Eggs," and I will deal with this question then.
This question will be dealt with later. (8) The "w
ter months" would mean the three winter months fro
15th October to the end of January. We could not
any account call an egg laid in July a "winter egg
(9) His last question is almost unanswerable. In fa
he has answered it himself when he adds "mu
depends on Breeding, Feeding, and Management"
his birds are bred-to-lay, I do not think a flock ave
age of 170 would be excessive.

POST-MORTEMS.

E. S. The trouble with the cockerel was favus,
white comb, as it is popularly called. It is contagio
both by direct and indirect contact, the incubati
period being 15 days. The closest inspection of th
bird's immediate incontacts should be made, and tho
showing any sign of the disease isolated for treatmen
The premises should be thoroughly disinfected, an
periodically so during the existence of the troubl
To treat, clean up the affected areas with soft soa
and warm water, and afterwards thoroughly inun
with carbolised vaseline, five per cent., or in seve
cases with much thickening with red oxide of mercu
ointment, 1 to 8 of lard or lanoline.

Answers to Queries.

Continued.

R. S. J. (Four Marks). I am afraid I could not ll you of a college where you could be trained in e Anatomical, Physiological and Genetical side poultry farming. The Harper-Adams' College ould give you a training in the theoretical side of ultry farming as well as the practical. I cannot swer your second question as to whether there ould be any chance of your working on a college rm during the vacations as part payment of your es. In answer to the third question, "Provided birds are of good size, do I consider it harmful them to start laying at a precocious age?" ell, if a bird starts laying at a precocious age, never reaches the upper limit of the size which inherited, therefore in that respect it would be rmful, but 5¼ lbs. is a fair weight for a Light ssex pullet at five months old. Of course, if a llet is well developed—that is, such as the two ich you say were hatched in April and are now and seven pounds respectively—size could not much affected, and it will not have the same luence on the size of egg as it would in the case a pullet which laid at a much more precocious e, and as a consequence never grew after. A -fecund pullet very rarely starts laying at a ecocious age, because high fecundity and early turity are correlated. You must not imagine t size is opposed to egg production. That is the case. It is egg production which is posed to size. Large birds are sometimes very d layers indeed, but the tendency of selection egg production has always been a reduction in body size.

V. L. (Embleton) sends sample of limestone grit excellent quality. The analysis shows 98.78% bonate of lime. With reference to his question to the percentage of peroxide of iron, I think s is too small to be of any benefit. Such a nple would be quite adequate to replace oyster ll. It would need to be a little finer for chicks. size as sent is quite suitable for adult fowls.

POST-MORTEMS—Continued.

he post-mortem findings in the case of the W. pullet were consistent with irritant poison-, there being considerable inflammation of the ire digestive tract. Oxalic acid is present in barb leaves, so it is possible that they were the rce of the trouble.

. C. The cause in the case of the R.I.R. pullet s apoplexy of the lungs, the determining factor ng torsion of the uterus, which set up excessive ining and induced such a high blood pressure t the vessels gave way under it. A rather unal case, and, of course, entirely accidental and a non-contagious nature.

A. E. S. The post-mortem examination of the W.L. cockerel showed that the proventriculus, parts of the intestines and the kidneys were acutely inflamed, the conditions being consistent with poisoning by some such irritant as lead. Old paint pots, etc., are a frequent cause of fatalities, being for some reason or other extremely attractive to birds, and a search of the premises may perhaps reveal the source of the trouble.

G. S. The post-mortem findings in the case of the two W.W. hens were as follows:—No. 481, a severe case of gout, the kidneys being completely blocked, and the internal organs, including the heart, thickly peppered with the urates. No. 515 was also gouty, but not to the same extent, the kidneys only being affected, but she had succumbed to sepsis following the retention of a collapsed thin-shelled egg in the uterus. Evidently the ration has been too rich in protein for them, or they are getting an abnormal supply of natural animal food, which has disturbed the balance to a dangerous extent. I should advise a twenty-four hour fast for this particular flock from which these cases of gout have come, followed by a mash containing 15 grains of Epsom salts for each bird; a reduction of the ration temporarily with the complete elimination of either fish or meat meals; 10- grain doses of Epsom salts in the drinking water every other day for ten days, or longer if they are still off colour. Birds acutely affected should receive 20 to 25 grains of salts at one dose, and allowed only grain and green stuff for some days, and also receive 10 grains in the water every other day as for the others.

G. C. T. The post-mortem examination of the W.L. pullet showed that she was the subject of haematoma or blood tumours of the skin. The cause of these is unknown, but affected birds make good recoveries, as a rule, if the swellings are lanced, and the parts cauterised with a silver nitrate pencil or painted with strong tincture of iodine. Affected birds should be isolated to protect them from the attention of others, and should be fed generously and receive an iron tonic to make up for the loss of blood that they sustain

WILTS COUNTY COUNCIL.

COUNTY EGG-LAYING TRIALS, 1924-25.

List of Winners.

Silver Challenge Cup, presented by Mrs. Robert Fuller, Great Chalfield, Melksham, for the entry obtaining the highest number of scoring points in the Heavy Breed.—Winner: Mrs. V. Parsons, Brickworth, Whiteparish (L.S.), 6320 points.

Silver Challenge Cup, presented for the entry obtaining the highest number of scoring points in the Light Breed.—Winner. Mr. J. H. Walton, Sherston, Malmesbury (W.L.), 6311 points.

Gold and Silver Medals to the first two entries of any breed of which there are more than six entries obtaining the highest number of scoring points.—Gold Medal—Winner: Mrs. E. M. L. Knight, Odstock (W.W.), 6059 points. Silver Medal—Winner: Mrs. L. G. Harman, Tisbury (W.W.), 5656 points. Gold Medal—Winner: Mr. J. H. Walton, Sherston (W.L.), 6311 points. Silver Medal—Winner: Mrs. E. M. L. Knight, Odstock (W.L.), 6233 points.

Gold and Silver Medals to the first two entries (any other variety) for Heavy Breed obtaining the highest number of scoring points.—Gold Medal—Winner: Mrs. V. Parsons, Whiteparish (L.S.), 6320 points. Silver Medal—Winner: Mrs. E. M. L. Knight, Odstock (L.S.), 6043 points.

(Continued at Foot of Column Next Page).

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

SPECIAL NOTICE.

Will members please note that the **VERY LATEST DAY** for Registering Pens in the 1926 S.P.B.A. Register is **OCTOBER 16th.** Forms may be had from the Editor, H. Mudie Draper, 25, The Chase, S.W. 4.

MIXING.

I have received the following letter from Mr. Hall. With regard to his remark that nothing is done by the Local Authorities, I am afraid nothing will be done until information is laid, and it is useless for us to expect the Local Authorities to act. We must take the matter into our hands, and lay information, and force them to act. It will be a good thing for the poultry industry when all of us recognise that we have to rely on ourselves:—

"Dear Sir,—In view of the large number of imported eggs mixed with or sold as 'English,' the enclosed cutting from the 'Kent Messenger' (contributed by me) may be of interest to readers of 'Eggs'

The grocer has since told me that he sold the eggs mixed with my new-laid, and got the extra 3d. per dozen profit, but what profit did the merchant get? The real value of them would not be more than 1s. 6d. per dozen; he charged 2s. 6d. per dozen wholesale.

I have reason to believe that large numbers of imported low-grade eggs are being sold at LOCAL NEW-LAID EGGS, yet nothing is done by the Local Authorities."

FARMERS AND POULTRY.

A writer in the "Kent Messenger" a few weeks ago advised general farmers to keep poultry and thus retain the £15,000,000 paid for imported eggs. He pointed out some of the advantages of keeping fowls, but failed to state the cost. In my opinion not one poultry-keeper in 100 could say what it cost him to produce a given number of eggs. Most writers on the subject enlarge on the fowls being able to find their own food. This is wrong in principle and a failure in practice. Birds that are left to board themselves are always unprofitable. Undoubtedly the general farmer is in the best position of any one to produce eggs if he would give the business the attention it requires. But can the farmer or poultry-keeper compete with the foreigner in the production of eggs I know from experience he can, if given fair competition Until imported eggs are marked this is denied him, because so many imported eggs, being sold as new-laid, give the genuine new-laid English egg a bad name. I had a case in point on Friday, the 18th inst., while calling on my customers, one at first refused to have any eggs at the price I asked him (wholesale), stating he could get new-laid eggs 3d. per dozen cheaper from a wholesale egg merchant whom he named. I at once challenged him to do so, and he sent a lad for three dozen. While the lad was gone I explained to the grocer how to tell a stale egg from a new-laid one. On the lad's return I at once stated the eggs were not new-laid. I said to the boy, "Did you ask for new-laid eggs?" He replied, "Yes." I then put one of my own eggs in a glass dish full of water. It lay flat on the bottom of the dish, like all new-laid eggs do. I then placed one of the merchant's eggs in the water, and up came the large end nearly out of the water, by which test I knew for certain that they had been laid over a month. They would only need to be kept a few more days to reach that condition suitable for electioneering purposes. I told the grocer the best he could do was to sell them as fresh eggs. He then said he should work them in with those he bought from me. I told him that such a proceeding gave the home produce a name, which could not be done if imported eggs were mar as undoubtedly these eggs were imported, and were not new-English eggs

To test a new-laid egg: Fill a dish with a flat bottom— inches deep or more—full of water; then place egg in. I lays flat on the bottom it is new-laid. If the large end upward at an angle of 45 degrees it has been laid quite weeks; if the slope is more, then it is staler. If the end comes up out of the water it is very stale, six week more, and not fit to eat.

West Peckham. W. HAL

THE HEATHFIELD AND DISTRICT POULT KEEPERS' ASSOCIATION.

That very much alive Society, the Heathfield District Poultry-Keepers' Association, propo establishing a branch in Brighton for the purp of supplying good quality foodstuffs at moder prices.

Enquiries have come from the Brighton dist from time to time, but carriage and delivery culties have prevented the Heathfield Associa from being able to serve poultry-keepers in Brigh and Lewes.

Now it is proposed to call a meeting in Brigh as soon as it is heard whether poultry-keeper the district are likely to support the project. T are therefore requested to send a postcard to Secretary, Mr. G. H. Coates, High Street, He field, to say whether they are in favour of the gestion, and whether they will attend a mee and induce other poultry-keepers in the neighb hood to become supporters.

ANNUAL GENERAL MEETING—MR. HEMELRYK'S RESOLUTION.

I have received numerous letters protes against Mr. Hemelryk's Resolution to increase subscription to the S.P.B.A. to ten shillings, allocating half that amount to the National Po Council.

One gentleman suggests that the officials getting out of touch with members. May I out to him that the officials are not concerned this resolution. It comes from an ordinary m ber of the Association, and must be submitte the Annual General Meeting in due course.

It is not for the Council to say whether re tions sent in by members shall be submitte not, and there is no question of the officials ge out of touch with members.

Everyone who is present at the meeting can their opinion of this or any resolution if they to do so.

Gold and Silver Medals to the first two entries (any variety) for Light Breed obtaining the highest number o ing points—Gold Medal—Winner: Mr. J. H. Walton, Sh (B.L.), 4990. Silver Medal—Winner: Mr. H. L. Lemon, P (Bl La Br.), 4914 points.

Gold, Silver and Bronze Medals for the birds obtaini highest number of scoring points in the Single Bird Test Light Breeds.—Gold Medal—Winner: Mr. E. Oatley, West A Trowbridge (W.L.), 1474. Silver Medal—Winner: Mr. R. J. Erchfont, Devizes (W.L.), 1216 points. Bronze Medal—W Mr. H. H. Pickford, Patney, Devizes (Bl. M.), 1199 points.

and adopted by the Council at its October meeting.

Income and Expenditure Account for the Year ended 31st August, 1925.

Expenditure.		£ s. d.
To Stationery, Printing, Postages and Advertising		298 3 5
,, Travelling and Miscellaneous Expenses ...		230 8 5
,, Dairy Show		70 1 2
,, Olympia Show		78 11 3
,, Palace Show		72 3 6
,, N.P.C. Affiliation Fees		25 2 7
,, Grant to Gloucester Branch		5 0 0
,, Salaries		494 2 1
,, Office expenses—		
Lighting, etc.	12 18 1	
Rates, Taxes & Insurances	18 14 10	
Repairs and Renewals	19 19 10	
Building and Equipment Depreciation	51 7 1	
		102 19 10
,, Census		15 18 0
,, Awards		22 12 6
,, Register—		
Publishing ...	785 11 7	
Postages and Printing ...	153 11 5	
Literary Contributions ...	5 11 6	
Expenses, Commission, etc. on Advertisements	94 3 2	
		1038 17 8
,, Wellingham Experiment—		
Appliances ...	168 8 4	
Food	58 5 2	
Labour ...	39 11 4	
	266 4 10	
Less value of Appliances and Food on hand	123 8 9	
		142 16 1
,, To Publications ...		12,049 14 5
		14,646 10 11
,, Balance being excess Income over Expenditure for the year ended 31st August, 1925. Carried to Balance Sheet ...		422 9 11
		£15,069 0 10

Income.		£ s. d.
By Subscriptions		1,726 10 6
,, Donation		0 7 4
,, Interest—War Loan ...		43 15 0
,, Sales of Badges		12 4 0
,, Register—		
Advertisements	762 18 10	
Extra Pens ...	4 7 0	
Sales ...	0 13 6	
		767 19 4
,, Wellingham Experiment—		
Sales of Birds and Eggs ...	31 8 2	
Add Stock of Birds on hand	67 0 0	
		98 8 2
,, Publications		12,419 16 6
		£15,069 0 10

BALANCE SHEET made up to the 31st August, 1925.

Liabilities.	£ s. d.
To Income and Expenditure Account, Surplus Balance as at 1st September, 1924	1,440 12 3
Add Net Surplus of Income over Expenditure for the year ended 31st August, 1925, as per attached Account ...	422 9 11
	£1,863 2 2

Assets.		£ s. d.
By Office and Equipment as at 1st September, 1924 ...	300 0 0	
,, Additions during year	39 7 1	
	339 7 1	
Less Amount written off ...	51 7 1	
		288 0 0
,, Wellingham Experiment—		
Appliances ...	120 0 0	
Pullets ...	67 0 0	
Food	3 8 9	
		190 8 9
,, Publications and Stationery		115 0 5
,, Badges		12 1 0
,, Sundry Debtors		46 6 4
,, Cash at Barclay's Bank, Limited ...	200 19 6	
,, Cash in hand	0 0 2	
		200 19 8
,, £1,000 5% War Loan 1929-47, at Cost ...		1,010 6 0
		£1,863 2 2

H. MUDIE DRAPER,
Hon. Treasurer.

I have examined the foregoing Statements of Accounts relating to the Scientific Poultry Breeders' Association for the year ended 31st August, 1925, together with the Books and Vouchers relating thereto, and I certify the same to be in due order, and in accordance therewith.

W. KELLER SNOW, F.S.A.A., *Hon. Auditor,*
Incorporated Accountant.

Dated this 7th day of October, 1925.

London, Guildford and Farnham.

APPLICANTS FOR MEMBERSHIP.

Stafford, H., Knowle Farm, Mellor, Marple Bridge, Stockport.
Scorror, H. L., Thorpe Arnold, Melton Mowbray, Leics.
Hughes, Mrs. G F., Dane Lise, Lyminge, Kent.
Duffield, W. D., Broomer Cottage, Cheshunt, Herts.
Neilson, F., Fieldhead Farm, Birstall, near Leeds.
Lambert, W., 58, Higher Bury Street, Hope Hill, Stockport.
Bloxham, C., Oxhey Farm, Bushley, Tewkesbury.
Haworth, H., 32, Claremont Road, "Laneside," Accrington, Lancs.
Tindal, J. E., Mayfield P.F., Hilton, Derby.
Symington, J Nobel, Emerson Croft, Hambrook, Emsworth.
Bell, R. H., The Hall, Knottingley, Yorks.
Roberts, Miss J., West Marden, near Emsworth, Hants.
Tallent, Miss V. K., Temple Farm, Sandford-on-Thames.
Panwinkler, Miss M. T., 10, Lockyer Street, Plymouth.
Kennington, J., Surlingham, Norwich.
Edge, F., Poplar Avenue, Levenshulme, Manchester.
Montgomery, Miss B., Benvarden, Dervock, Co. Antrim.
Jenyns, R. F., The Old House, Garlinge Green, Petham, near Canterbury.
Smith, Miss J. Alderson-, "Eastfields Pedigree" Farm, Braunston, near Rugby.
Carrick, J., 313, Great Eastern Road, Parkhead, Glasgow.
Ashton, H., 7, Hampden Street, Walton, Liverpool.
Partridge, Miss I. H., "Melita," Barkham Road, Wokingham, Berks.
Whyte, Miss M., Benenden School, Cranbrook, Kent.
Freeborough, A., Manor Hill Farm, Purton, Wilts.
Charters, Major D M., St. David's P.F., No. 6, Civil Lines, Roorkee U.P., India.
Farquharson, Miss J. W., Hollies Drive, Wednesbury, Staffs.
Ormerod, W., Brownlow Farm, Higher Ince, near Wigan, Lancs.
Yates, W., Temple Road P.F., Halliwell, Bolton, Lancs.
Picton, W., Ash Glen, Buckwins, Billericay, Essex.
Shillito, L., Sunnyside P.F., Lund Wood, Cudworth, Yorks.
Bradley, M. J., Barnwood, Earby, via Colne, Yorks.
Woodward Capt. W., Place Bungalow, Place Road, West Cowes, I.O.W.
East, A. H., Chorlton Fold P.F., Woodley, Stockport.
Oliver, H. Kensworth P. and Fruit Farm, Reigate Road, N. Looe, Ewell, Surrey.
Windle, P. L., Dean Head Farm, near Bacup, Lancashire.
Kettle, L. J., 17, Wilson Street, Todmorden, Lancs.
Goulding, Miss E. C., Fourwinds, Kilrane, Co Wexford.
Keller, C. D., Meadowbrook P.F., Stanwell, Middlesex.
Lea, Mrs. A. M., Marsh Farm, Edgmond, Newport, Salop.
Starritt, Mrs. M., "The Mills," Desertmartin, Belfast.
Wells, J. A. E., Thryft House, Bents Green, Sheffield.
Lee, C., Audiburn P.F., Kingston, near Lewes, Sussex.
Hewett, Mrs. L., Wightfields Manor, Deerhurst, Tewkesbury.
Brice, G. M., c/o Mrs. Ricketts, 4, Netley Cottages, Portsmouth Road, near Woolston, Hants.
Sutcliffe, J A., 9, Arnold Street, Tuel Lane, Sowerby Bridge.
Lloyd, Miss C., Arus-na-Vanach, Sherfield-on-Loddon, Basingstoke, Hants
Lamont, H Wilson, "The Villas," Invergowrie, by Dundee.
Knott, H. B., 20, Ravendale Street, Scunthorpe, Lincs.
Howdle, H. J., 168, Franklin Road, King's Norton, Birmingham.
Hartley, C., Capel-le-Fern P.F., near Folkestone.
Shepherd, S. H., Oaklene P.F., Hill's Lane, Kemsing, Kent.
Hawkins, Miss G., "Estrilda," 206, Clive Road, Dulwich, S.E.21.
Price W. H., Moorside, Wardle, Rochdale, Lancs.
Goff, W. G., 16, Glenthorne Avenue, Shirley Road, Addiscombe.
Young, E C., Brookfurlongs, Winchcombe, Glos.
Asttbury, F W., "Stocklands," Long Bank, Bewdley, Worcs.
Hibbert, C. Bradley, 130, Lodge Lane, Newton, Hyde, Cheshire.
Couzens, R. H., Blackleases, Kirkby Thore, Penrith.
Parkinson, —, New Manor House Farm, Sowood, near Hälifax.
Falkenstein, A. J., Marson's Croft, Rotherfield, Sussex.
Russell, A. G., 2, Rectory Road, East Danvland, Colchester.
Brown, D., Duulena, Dumbuck Crescent, Dumbarton
Hewitt, E., 1, Gorse Villa, Whitchurch Road, Prees, Salop.
Clayton, R. Spencer (B.Sc.), "Parame," Rawridge End Lane, Stopsley, near Luton, Beds.
Stafford, Capt. C., The Old Posting House, Chapel Brampton, Northampton.

LANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES' LAYING COMPETITION.

Held at the Lancashire County Council Farm, Hutton, under the supervision of Mr. C. H Dobbin, the County Poultry Instructor. A more detailed report will be issued shortly, giving a full list of prize-winners and awards.

Twelfth Month Report—10th August to September 16th, 1925.

The following are the leading positions in each section, showing number of Eggs and Points for the twelve months:—

Section 1. White Leghorns. Large Breeders (Three Birds).—R. Beesley, 691, 3841; J. Booth, 695, 3773; A. C. Harrison, 664, 3630; E. Cam, 612, 3451; W. Hammett, 593, 3398; Core and Pickover, 638, 3198.

Section 2. Light Breeds. Large Breeders (Three Birds).—O. Rawlinson, 575, 3469; Mrs. J. H. Hill, 471, 2421; F. Lord, 489 2402; J. P Willacy, 465, 2364; H. Hilton, 425, 2128; W. Hammett (one dead), 382, 2038.

Section 3. White Wyandottes. Large Breeders (Three Birds).—G. Bates, 626, 3579; W. Hamnett, 547, 3080; Mrs. S. Sefton, 571, 2998; J R. Dawson, 505, 2839; F. Holden, 518, 2817; J. Hodgson, 532, 2771.

Section 4. A.O.V. Heavy Breeds. Large Breeders (Three Bi—F. Harvey, 587, 3287; W. Weardon and Sons, 555, 3002; T. Edm son, 535, 2975, T. Braithwaite, 495, 2845; T. Barron, 502, 2751 Basnett (one dead), 450, 2649.

Section 1. Light Breeds. Small Breeders (Single Birds).—G Wolstenholme, 214, 1195; H. West, 209, 1150; R. Mills, 206, 114 Wilkinson, 231, 1104; O. R. Lees, 197, 1098; J. Stanley, 181, 10

Section 2. Heavy Breeds. Small Breeders (Single Bird J. W. Pearson, 217, 1269; D. Braithwaite, 220, 1167; T. Plumb, 1028; A. D. Walton, 208, 1002; W. R. Robinson, 153, 887; Richards, 181, 880.

GLAMORGAN AGRICULTURAL COMMITTEE.

EGG-LAYING TRIALS, 1924-25.

Awards for Pens of Birds.

The "Weekly Mail" Silver Challenge Cup (competed annually) for the pen of Heavy Breeds producing the grea value of eggs during the trials.—J. Joshua, Tondu, for No. 42 of Rhode Island Reds.

The "Lewis Lougher" Silver Challenge Cup (competed annually), for the pen of Light Breeds producing the grea value of eggs during the trials.—J. Joshua, Tondu, for Pen 3 of White Leghorns.

The Glamorgan Agricultural Committee's Gold Medal for pen in the Heavy Breeds producing the greatest value of during the trials.—J. Joshua, Tondu, for Pen No. 42 of Rh Island Reds.

The Glamorgan Agricultural Committee's Bronze Medal the pen in the Heavy Breeds (other than the winning bre producing the greatest value of eggs during the trials. Arnett, Clydach, for Pen No. 8 of White Wyandottes.

The Glamorgan Agricultural Committee's Gold Medal for pen in the Light Breeds, producing the greatest value of during the trials.—J. Joshua, Tondu, for Pen No. 3 of W Leghorns.

The Glamorgan Agricultural Committee's Bronze Medal the pen in the Light Breeds (other than the winning bre producing the greatest value of eggs during the trials.— Simons, Port Eynon, for Pen No. 22 of La Bresse.

Awards for Individual Birds.

For individual birds of the Heavy Breeds, producing greatest value of eggs during the trials:—

Gold Medal.—J. R. Evans, Abertridwr, Rhode Island Red, 2, Pen 26.

Silver Medal.—J. Joshua, Tondu, Rhode Island Red, No Pen 42.

Bronze Medal.—A. Evans, Barry Dock, Rhode Island Red, 4, Pen 25

For individual birds of the Light Breeds producing greatest value of eggs during the trials:—

Gold Medal.—Howell and Phillips, Barry, White Legho No. 2, Pen 7.

Silver Medal.—J. Joshua, Tondu, White Leghorn, No. 1, Pe

Bronze Medal.—J. Joshua, Tondu, White Leghorn, No. 3, Pe

BRIGHTON STOCK TEST.

Final Report—September, 1925.

Heavy Section.

Competitor. No of Pullets. Variety	1st Gde. Sept.	2nd Gde. Sept.	Total 1st. Gde. Eggs.	Total 2nd. Gde. Eggs.	H. and R. Score.	Average.
R. Woodford (13 R.I.R.) ...	137	—	2520	32	103	192
Chisbury P.F. (13 W.W.)...	120	—	2311	32	78	184
E. Soames (9 R.I.R.	108	—	1793	12	49	200
E. F. Besford 9 W.W.) ...	107	—	1718	25	50	193
Countess Buxton (14 W.W.)	82	—	2257	40	70	163
R Mummery (11 W.W.) ...	151	—	1673	33	65	154
Light Section.						
W. Bradbury (16 W.L.) ...	207	—	3122	18	100	197
Duke's P.F. (16 W.L.)	210	—	2958	19	99	183
D. W. Gunston 12 W.L.) ...	170	—	2317	13	87	194
Miss Ransford (15 W.L.) ...	90	—	2554	27	98	173
Mrs. Gibson (16 B.L.)	177	—	2910	21	91	180
Allen Smith (13 W.L.) ...	72	—	2301	42	86	180
Allen Smith (12 B.L.)	195	1	2219	14	83	182
Duke's P.F. (18 B.L.)	255	2	3172	14	81	177
Mrs. Gibson (13 W.L.)	85	3	2312	29	77	180
Capt. Beckett (12 W L.) ...	178	—	2365	24	53	199
Major Shepherd (15 W.L.).	125	—	2643	15	73	177
Chisbury P.F. (10 W.L.) ...	99	—	1806	24	66	183
Capt Close (13 W.L.)	63	—	2125	32	82	165
D. Brown (10 W.L.)	77	1	1770	25	65	179
Scott Miller (8 W.L.)	79	—	1559	21	37	197
B. Glendenning (5 W.L.) ..	6	—	870	11	43	176

Correspondence—Continued

FARMERS AND FOWLS.

ear Sir,—I was pleased to read Mr. Rosedale's trained comments on Mr. Malden's article. fortunately for his object he is less kind to the mer than is the much-abused Mr. Malden, for ere the latter shows a gross profit of £1 8s. d. he makes, not £1 5s. as he says, but £1 1s. d. Figures, statistical or otherwise, seem to be quicksands of the poultry industry, of which re later on.

our correspondent should no deprecate the allness of his farm, as the egg production ieme is designed to benefit all farmers, great or all.

le is but one of thousands who, if they buy at , must buy by the cwt.

s a larger farmer he might benefit more. ie he might also be tempted to grow food at a s, but, as it has been quaintly said by one hority, think of the profit of running poultry the stubble!

t is by such plumbing of economic depths, by owing them the use of the farm rent free, and granting them other perquisites of like nature ether the farm can afford it or not, that farm iltry become the best paying thing on the farm, l justify the contention that they can produce s at half the cost of the specialist egg.

ut, how truly absurd! Such economics are ten to the core.

do not quite follow Mr. Rosedale's remark, nyone able to be on the spot and do much of own work will agree with your criticism of the ssimist' remarks." At the back of it there tainly *appears* to be the peculiar idea that while ian would be justified in charging up his labour any outsider for whom he worked, service on own farm is of no monetary value. But—and again.

n connection with our object much abuse has n levelled at the absent Mr. Malden. I have d most carefully your excerpts taken from his icle without seeing in them anything equal to absurdities of Mr. Harding's paper.

f anyone is able to point out in them anything substantial import detrimental to agricultural erests, I should be deeply interested by his ng so.

Vith further regard to figures :—

o obtain reliable figures as to the amount of d consumed by a hen, I hunt up a Harper-ams' test report appearing in "Eggs," of ruary 6th, 1924, I find it consumes 6 (six) lbs. 48 weeks. I am impressed, but not convinced.

rom a contemporary journal of recent date, ring a facial expression of modesty, I learn t Dr. Crowther (the professor who tells Mr. edale that he ought to produce eggs at half cost of the specialist effort) yearns for, and in after-dinner speech, "sees no reason why we uld not secure, the bulk of the £20,000,000 trade of imported birds." His hopes are centred in the farmer, not the specialist. If the professor will but push on with the egg production scheme his little table-bird worries will automatically cease long, long before this country is raising sufficient layers to displace that 2,438 million egg import trade.

The cheeriest optimist could wish for no brighter prospects than his in this direction, unless consumption be greatly stimulated by lower prices than now obtained for British birds.

The Trade Navigation return for imported birds for Great Britain and Southern Ireland was, for 1924, £1,851,626. Whether the industry's hope is to be fed on food that could have been bought cheaper than it was grown, or whether the food is to be purchased abroad in place of eggs, is not yet quite clear. Perhaps when we have ceased blowing bubbles, and have got down to Mother Earth in a more sober frame of mind, such minor defects will receive their due share of attention, and will be made to assume the transparency of truth

Yours faithfully,

BIRMINGHAM.

EGG-LAYING TEST.

THE GLOUCESTERSHIRE REPORT.

Figures for Twelfth Month.

The following is the report on the Gloucestershire Laying Test (under the supervision of Mr. L. G. Price, County Instructor in Poultry Keeping) for the twelfth month ended September 11th :—

During the month 4,129 eggs have been recorded against 4,434 the previous month, giving a grand total of 57,946 eggs for the complete 48 weeks, and an average of 181.6 in respect of the 319 pullets entered. It is hoped that competitors in the 1925-26 test will assist in maintaining this satisfactory average by entering the fittest of stock only.

A full report will be circulated to competitors and press as soon as possible, giving details of awards, number of eggs, i.e., 1st, 2nd and 3rd grade, and all other particulars of each individual bird, and copies will be obtainable, by any other interested persons, upon application to the Hon. Secretary.

LEADING PENS

Section A (1). White Wyandotte (Professional). (Five Birds constitute a Pen).—E. J. Stone, 4,547 points; H. Ludlow Hewitt, 4,525; P. M. Hinton, 4,382; J. E. Boyd, 4,343; T. L. Davies, 4,324; H. Bennett, 4,320.

Section A. (2). A.O.V. Heavy Breed (Professional).—Miss M. Lawrence (R.I.R.), 4,310; J G. Herbert (R.I.R.), 4,280; G. H. H. Simmons (L.S.), 4,165; M. C. Beale (R.I.R.). 4,013; J. E. Boyd (R.I.R.), 3,977; C. G Young (RI.R.), 3,918.

Section A. (3). A.V. Light Breed (Professional).—Miss N. Townsend, 5,057; Miss H. Baylis, 4,978; Sherborne Park P.F., 4,660; G. H. H. Simmons, 4,602; Mrs. W. Pearce Ellis, 4,576; Hinton P.F., 4,407.

Section B. (1). A.V. Heavy Breed. (Confined to owners of not more than 50 laying head).—Miss M. Brown (W.W.), 4,488; Maisemore School (W.W.), 4,405; A. W. Moses (L.S.), 4,206; L. Grist (W.W.), 4,165; R. T. Miles (B'Veld), 1,989.

Section B (2). A.V. Light Breed. (Confined to owners of not more than 50 laying head).—L. Grist, 4,492; E. C. Skirton, 4,134; J. D. Crewdson, 4,111; Miss M. Brown, 3,965. All White Leghorns.

Pen Duck Section. (Four ducks to a pen).—G. H. H. Simmons (K.C.), 735; G. B. Young (K.C.), 733; Major J. G. Dugdale (K.C.), 648; Sherborne Park P.F. (K.C.), 643; S. J. Phillips (K.C.), 628; W. R. Partridge (W.R.), 543.

SINGLE PEN SECTION.

Section 1. White Leghorns.—L. Grist (13), 1,150; G. H. H. Simmons, 1,103, J. L Brown, 1,090; H. W. Stephens, 1,078; Miss K. Feaviour, 1,062; Miss N. Townsend (19), 1,027.

Section 2. White Wyandotte.—H. W. Fowles, 1,171; Lord Sherborne (37), 992 W. R Partridge (38), 976; W. R. Partridge (34), 974; Philip Clapham (40), 971; G. H. H. Simmons (31), 908.

Section 3. Rhode Island Red.—Miss M. Lawrence (59), 1,089; G B. Metcalfe, 876; Miss M. Lawrence (42), 774; W. R. Partridge, 740; S. Barnes, junr. (48), 661; S. Barnes, junr. (45), 599.

Section 4. A.O.V. Heavy Breed.—Churchdown P.F. (An.), 1,033; H. W. Stephens (B.L.), 912; Churchdown P.F. (B.L.), 807; Major J G. Dugdale (B.L.), 792; Miss K. Feaviour (B.L.), 782; Miss M. Johnson (W. La B.), 766.

Section 5. A.O.V. Heavy Breed.—Miss M. Lawrence (Buff R.), 938; W. R. Partridge (B'Veld), 916; Mrs. E. Weinholt (Aus. Orp.), 913; G. H. H Simmons (Buff R.), 896; Lady Bledisloe (Aus. Orp.), 851; R. T Miles (B'Veld), 779.

Section 6. Ducks.—Mrs. H. L. Hanks (K.C.), 305; H. W Fowles (K.C.), 232; Mrs. W. Pearce Ellis (K.C.), 192; W. R. Partridge (15) (W.R.), 191; W. R. Partridge (14) (W.R.), 185; G. H. H. Simmons (K.C.), 179

H. S. WRIGHT, Hon. Sec.,
Shire Hall, Gloucester

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, 9th OCTOBER, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is freely offered, and, with a dull demand, prices are lower at all markets except Hull, milling samples averaging 10s. 3d. per cwt. as against 10s. 8d. last week. Imported wheat also meets a slow trade at considerably easier values, No. 1 Manitoba at an average of about 13s. per cwt., being 1s. 3d. per cwt. cheaper on the week. British malting barley continues in dull request at about recent prices, but feeding descriptions, which are also in little demand, are cheaper at London and Hull. Imported grinding barley is in ample supply, and generally realises less money. Oats mostly meet a quiet trade, and imported have generally declined in value, while English white oats are also cheaper at Liverpool and London, but home-grown black varieties maintain recent quotations. Maize is in liberal supply and in little request at decidedly lower prices, Argentine averaging 8s. 11d. per cwt., a reduction of 6d. per cwt. on the week.

Coarse middlings are cheaper at most markets, reductions of 2s. 6d. to 7s. 6d. per ton being recorded, while at London all other offals sell at easier prices. Meals generally meet a quiet trade, and barley meal and maize are cheaper on the week. Oil cakes are in slow request at lower values.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull, £6 17s; Liverpool, £7 5s; London, £6 15s. Broad Bran: Bristol, £8 17s; Hull, £8 7s; London, £8 5s. Middlings—Fine (Imported): London, £9 5s; Coarse (British): Bristol, £9 5s; Hull, £9 5s; Liverpool, £9; London, £8 7s. Pollards (Imported): Bristol, £7 10s; Hull, £7; London, £7. Rice Bran: Bristol, £7 15s; Liverpool, £7 2s. MEAL.—Barley Meal: Bristol, £10; Hull, £10 10s; London, £10 2s. Maize Meal: Bristol, £10 15s; Hull, £9 18s; Liverpool, £10 5s; London, £10 15s. Maize Meal (S. African): Bristol, £9 15s; Liverpool, £9 10s; London, £9 10s. Maize Germ Meal: Hull, £10 10s; London, £10. Maize Gluten Feed: Bristol, £11 12s; London, £9 15s. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 10s; London, £9 17s. Bean Meal: Bristol, £13 5s; Hull, £11 8s; London, £12 5s. Fish Meal: Bristol, £20 10s; Hull, £20 10s; Liverpool, £20 10s; London, £20 10s.

EGGS AND DEAD POULTRY.

Egg supplies are again lighter, but the market generally is fairly steady, although quotations continue to harden. Dead poultry is plentiful, and trade, on the whole, is rather slow at barely recent figures.

Week-end Prices—Eggs (per 120): British, 24s 6d, 18s 6d; Irish, 23s 6d, 23s 3d; Danish, 23s 6d, 22s 6d; Dutch, 24s 3d, 23s 3d; Canadian, 20s 0d; Belgian, 22s 0d, 21s 0d; Italian, 19s 6d, 18s 6d; Argentine, 18s 0d, 17s 0d; Lithuanian, 17s 0d, 16s 0d; Polish, 13s 6d, 12s 9d; Chinese, 14s 6d, 13s 6d; Russian, 16s 0d, 14s 9d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish, 1s 1d, 11d; Others, 1s 4d, 1s 0d. Ducks, 1s 2d, 1s 0d. Geese, 1s 1d, 10d.

EGGS.

Per Doz.—Ashford: First, 2s 11d; Second, 2s 9d. Birmingham: First, 2s 3½d; Second, 2s 2½d. Bridgwater: First, 2s 11d; Second, 2s 9d. Chelmsford: First, 2s 10½d; Second, 2s 6½d. Colchester: First, 3s 0d; Second, 2s 8½d. Doncaster: First, 2s 8d; Second, 2s 6d. Dorchester: First, 2s 6½d; Second, 2s 6d. Exeter: First, 2s 6d. Hereford: First, 2s 6d. King's Lynn: First, 2s 6d. Llandilo: First, 2s 6d. Mold: First, 3s 0d; Second, 2s 10d. Montgomery: First, 2s 7d. Newport (Mon.): First, 2s 9d. Norwich: First, 2s 6d. Oswestry: First, 2s 10d. Penzance: First, 2s 2d; Second, 2s 1d. Saffron Walden: First, 3s 0d. St. Ives (Hunts): First, 2s 6d; Second, 2s 4d. Salisbury: First, 2s 9d; Second, 2s 8d. Skipton: First, 2s 7d. Truro: First, 2s 1d. Welshpool: First, 2s 4d; Second, 2s 1d. *Carlisle: First, 2s 10d. *Derby: First, 2s 9d. *Ipswich: First, 2s 6d; Second, 2s 0d. *Lincoln: First, 2s 6d. *Shrewsbury: First, 3s 0d; Second, 2s 9d. *York: First, 2s 10d; Second, 2s 9d.

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: First †5s 0d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 3d; Second, 1s 2d. Newport (Mon.): First, 1s 6d; Second, 1s 4d. Truro: First, 1s 4d. Welshpool: First, 1s 2d; Second, 1s 0d. *Derby: First, †5s 6d. Second, †3s 6d. *Ipswich: First, 1s 6d. *Lincoln: First, †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 0d; Second, †4s 0d. Llandilo: First, 1s 5d; Second, 1s 3d.

DUCKS.

Per lb.—First, 1s 2d; Second, 10d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 3d; Second, 1s 2d. Llandilo: First, 1s 6d; Second, 1s 4d. Welshpool: First, 1s 2d; Second, 1s 0d. *Derby: First, †4s 6d; Second, †3s 6d. *Ipswich: First, 1s 4d. *York: First, †6s 0d; Second, †5s 6d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

“Eggs.”

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, October 14th, 1925.

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GLOUCESTER EGG-LAYING TEST ... ...
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Contributions.—The Editor will always be pleased to consi contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence “ Eggs ” to their poultry-keeping friends.

Subscriptions to “ EGGS,” 12s. 8d. per annum; 6s. 4d. for months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beec Rudgwick, Sussex.

All communications with regard to Advertisements should addressed to Mr. S. H. Burles, “ Eggs,” 94, Farncombe Str London, S.E.16. Telephone: HOP 894.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of “ Eggs,” it imperative that new advertisements and alterations are rece by FIRST POST ON FRIDAY MORNING to ensure insertion in following Wednesday's issue. It is hardly necessary to add the earlier in the week we receive copy the better it is for ev one concerned.

Classified Advertisement Rates will be found at top of first of classified advertisements.

PROOFS.—We cannot guarantee to submit proofs unless plete copy is to hand by FIRST POST ON THE MON PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISS

OUR SPECIAL DAIRY SHOW NUMBER.

THREE SPECIAL SUPPLEMENTS.

Our Dairy Show issue, dated October 21st, w as usual, be a much enlarged number, contain amongst many other good things three spe supplements of exceptional interest. It will be sale at our Stand in the Gallery on each day the Show. Regular advertisers are well aware what an exceptional “ business bringer ” Dairy Show issue is. To those who do not adver regularly, we would strongly urge the booking a space. The sales always show an exception large increase, but the rates remain the sa viz., 6s. 6d. per single column inch. **“ CO MUST REACH US BY FIRST POST FRID NEXT, 16th inst.**

583

gs," Wednesday, October 21st, 1925.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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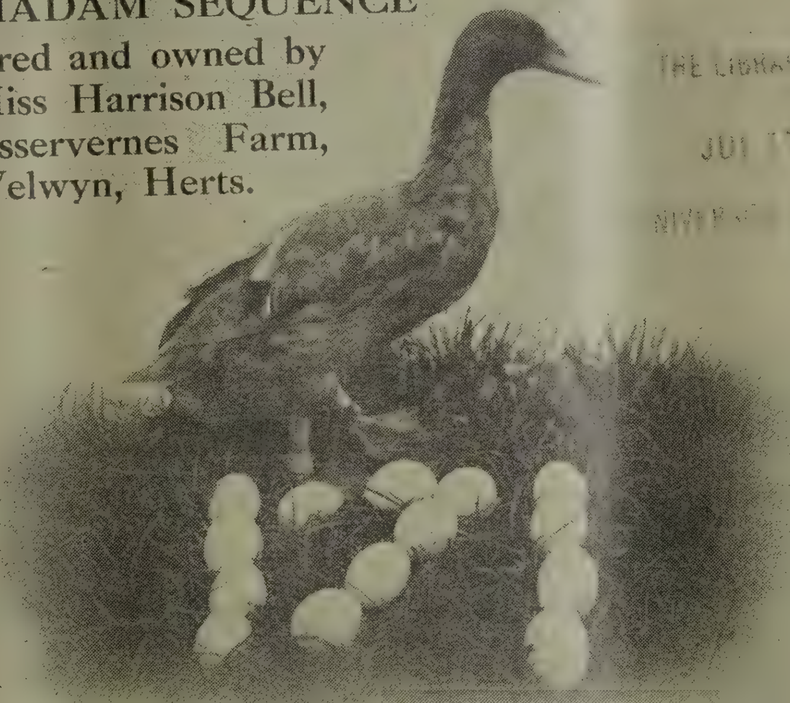
Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months	Post	Free	12/8
Six Months	,,	,,	6/4
Three Months	,,	,,	3/3

"MADAM SEQUENCE"
Bred and owned by
Miss Harrison Bell,
Sisservernes Farm,
Welwyn, Herts.



THE LIBRARY OF THE
JUL 17 1926
UNIVERSITY OF ILLINOIS

The KHAKI CAMPBELL Duck
that laid 171 eggs in 171 days.

Mrs. Strong's Layers

STILL IN FRONT RANK.

Won Challenge Cup and Silver Medal for best Utility pullet at Royal Dublin Show, May, 1925; also 1st and 3rd prizes.

First Silver Cup offered in Irish Laying Test, 1919-1920, with Pen 48, with record of 1,535 eggs (6 hens) in twelve months.

Silver Cup in National Utility Laying Test, 1917-1918.

£25 Prize in "Daily Mail" Laying Test, 200 pens competing.

Special Prize for Winter Laying won by Pen 38, White Wyandottes, 1923-1924.

Special Prizes by "Lady Erin" and "Royal Meath," who held world's records with 311 and 309 eggs in 12 months, 1917-1918, 1919-1920, and many others too numerous to mention.

BREEDS KEPT:—

WHITE WYANDOTTES, W. LEGHORNS, LIGHT SUSSEX, RHODE ISLAND REDS.

Early hatched 1925 Cockerels from high-record hens, from **21/-** each.

Eggs and Chicks in Season. Catalogue Free.

Mrs. STRONG,
Moat House, Kells, Meath, Ireland.

SECURE BLOOD-TESTED STOCK NOW!

FROM

John H. Dowden & Son.

We have a number of individually recorded hens in our five varieties,

W.L., W.W., R.I.R., L.S., and B.L.,

also a few stock cockerels, bred from individually recorded and progeny-tested hens. Write for our illustrated catalogue without delay, and secure the pick of these birds NOW.

JOHN H. DOWDEN & SON,
"Heydown," Heathfield, Sussex.

"SALCA"

A mineral mixture included in the mash is made desirable by the heavy egg production of poultry to-day and the consequent drawing on the frame of the bird for excessive calcium salt requirements. "Salca" supplies the salts and the way

Through Health to Cheaper Production

An ingredient costing 14/- per cwt. does not increase the cost of feeding. You can get ½ cwt. for 7/9, 7 lbs. for 2/- Carriage Paid, England and Wales.

From your dealer:—
14/- per cwt.; 7/9 ½ cwt.; 1/6 7 lbs.

"Salca" is registered and is manufactured only by:—

CLIFFORD de KUSEL
OTFORD, KENT.

Dealers recently added to the list of those stocking "Salca"— The Heathfield and District Poultry Keepers' Assoc., Heathfield, The Heasandford Smallholders Assoc., Burnley, Messrs. Carr, Macdonald & Cleveley, Heathfield, Messrs. Osborne and Young, Brixton and Branches, Messrs Minching Bros., Binfield, Bracknell, Messrs. Drake & Mount, Bracknell, Addlestone, etc., Surrey, William Hatton, Great Urswick. Ulveston, Lancs., T. Rowntree, Manchester Road, Tyldesley, Lancs., Thomas Hopwood, 21, Green Lane, Padiham, Lancs, F. A. Young, Junr., Station Road, Horley, Surrey, etc.

"SALCA"

is as essential to the supply of calcium salts as is a good fish or meat meal to the supply of animal protein. "Salca" will help to build up and maintain a strong frame in your birds.

HEAVY LAYERS and BREEDING STOCK NEED IT

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, OCTOBER 21st, 1925.

Editorial.

S.P.B.A. SECRETARY'S REPORT.

Ladies and Gentlemen,—I think we may justly aim that the past year has been the most suc- :ssful in the annals of our Association. There ive been years when there has been a larger crease in membership, but at the present time e total number of fully-paid-up members (6,321) higher than at any previous time in our history; it steadily increasing, and this in spite of the fact at the past twelve months have been very trying ies for those engaged in the industry, and many ve been compelled to close down. No special :ort has been made to enrol members, and this eady and continuous increase may be fairly garded as a tribute to the work of your ssociation.

If I may refer first to the Discount System, this ntinues to be very popular, and that our mem- rs benefit by it is indicated by the fact that we rchased for them during the past twelve months ods to the value of £23,785 16s. 1d. It has rked very smoothly.

FOOD PURCHASE SCHEME.—At the General eeting two years ago a resolution was passed, structing the Council to take steps to devise a ieme to provide foodstuffs for members at the vest possible prices. A committee was ap- inted, and after much hard work and very care- consideration of various proposals it was com- led to report that it had not been successful. the General Meeting last year a committee was pointed from the members present to further isider the matter, but this did not meet with y greater success. Eventually the present ieme was devised, and I have pleasure in orming you that it is meeting with a very great asure of success, and there is every hope that may be able to develop to the great advantage our members. The scheme was only started March, and to date (I am only giving you round ires) we have bought over £11,000 worth of d for members. In one respect we have failed our object, the hope—and it was on this hope t the scheme started—that members would nbine and buy in bulk, in lots of not less than tons; in this we were disappointed, very few mbers took the trouble to co-operate with others, and it was not until we were able to induce suppliers to mix mashes to S.P.B.A. formulas and supply in 5-cwt. lots at wholesale rates that any great interest was manifested. We are now able to supply the following mashes at

CHICK MASH	**12/6.**
GROWERS' MASH	**11/6.**
BREEDERS' MASH	**12/6.**
LAYING MASH	**11/6.**

In lots of 5 cwt., free on rail.

Developing on these lines, arrangements have been made for the supply of

PURE SUSSEX GROUND OATS	**at**	**13/-**	**per cwt.**
PURE MEAT MEAL	,,	**13/6**	,,
MEAT AND BONE MEAL ...	,,	**13/-**	,,
LOCUST MEAL	,,	**18/-**	,,

These are free on rail, in 5-cwt. lots.

Especially would I draw your attention to an excellent brand of fish meal, guaranteed manufactured from pure white fish and having the following analysis:—

> Albuminoids, 58/60 per cent.; Phosphates, 18/20 per cent.; Salt, 3 per cent.; Oil, 2 per cent.

I have no hesitation in saying there is not a better brand of fish meal on the market than this; there is no other fish meal produced with a lower salt and oil content, and we are able to offer it at 19/6 per cwt., f.o.r., in lots of not less than 5cwt.

Other arrangements are: an excellent brand of meat meal, albuminoids 50 per cent., 15/6 per cwt., carriage paid.

If I may say so, you would be well advised to consider this. Pure meat and bone grains, 50-52 per cent., 28-30 phosphates, at the same price.

We are endeavouring to make arrangements as to other foodstuffs on the same terms, and as soon as we are able to do so the announcement will be made in "Eggs"; but I want you to be a little patient, as we cannot manage these things in a moment. The chief complaint that we receive is that we are doing nothing for the back-yarder and the small poultry-keeper. This is both unfair and untrue. It should be obvious to everyone that we cannot arrange for ½ cwts. or cwts. to be supplied at wholesale rates; if the back-yarder would combine they could take full advantage of the scheme, an ounce of self-help saves a ton of grumbling.

There are certain favoured areas where members, owing to local conditions, are able to buy more cheaply than we can supply. These are things we cannot help, we may be able to do so in time, and I must ask you to remember that we are only at the beginning of things yet. We could have bought even more cheaply, but quality is essential to the success of the scheme. The most encouraging thing is, that whereas, in the first place, we had great difficulty in persuading the wholesale firms to work with us, they are now approaching us. Scores of letters have been received telling us that members have used the weekly price lists, and have prevailed on the millers and corn merchants in their district to supply on the same terms. That is all to the good. All complaints as to quality are investigated at once. These have been very few, but we have had to strike two firms off the list. We have now twenty firms supplying us, from Aberdeen to Plymouth, and also in Northern Ireland.

Turning to other things. With the increase in membership there has necessarily been a very great increase in correspondence, and I cannot claim, as I have in previous years, that this has all been deal with immediately. In time I hope we shall so organise the staff that you will have no cause for complaint, but a scheme like the Food Purchase Scheme needs some organising, and makes a great demand on the staff, which has been doubled since last year. It is necessary to say, that while we wish to assist our members in every possible way, there are some who exceed the limit, and, in fairness to others, I must point out that we are not conducting a correspondence class; not a day passes without our getting one or two letters asking anything from a dozen to twenty questions. Experience has taught me that if I venture to answer these without a protest, they are immediately followed by another lot, and one might keep on indefinitely.

A Rhode Island Red Hen, owned by Miss Malcolm, which made a record of 266 eggs in twelve months. All these eggs were above the average size, but, in spite of that, her hatching percentage was 90 per cent.

A White Leghorn Cockerel, owned by Miss Malcol
Dam's record 447 in two years. Weight 5 lbs. This hen w
remarkable for the wonderful hatchability of her egg

One great and pleasing feature is the inte which is taken in our work in all parts of the w in all European countries, from India, Ch Japan, Egypt, the whole of the Dominions, United States, the Malay States; even from land we have had letters during the past yea

EXPERIMENTAL WORK.—The greatest terest has been manifested in the experiment have conducted at Wellingham, and we mus feel grateful to Miss Malcolm and Mrs. Pem not only for the free use of their land, but the extraordinary efficient manner in which experiments have been carried out. No one have given greater and more careful attentio the details which are so important in experim work.

You are aware of the decision of the Co to start an Experimental Farm at Rudgwick u my supervision. A suitable site has been fo and we hope to commence shortly certain ex ments in feeding, to be followed by othe breeding and rearing.

Members have again responded generousl the appeal for the National Poultry Counci the good work of which you representatives taken a very active part. You are represe on every committee.

Of the satisfactory financial state of the ciation you will hear from the Hon. Treasurer, Mr. Kitson, as chairman of the committee, report the progress of your journal, "Eggs.

Economical and Effective Housing.

By L. G. PRICE.

Plans referred to in this article are included in e Special Supplement given with this issue.

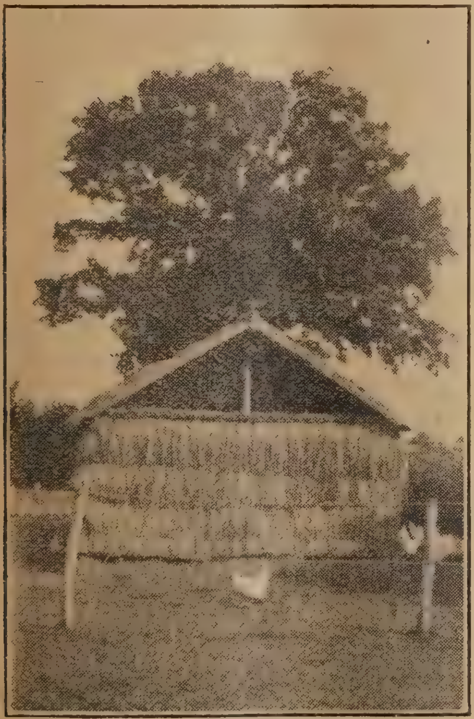
There are very few poultry-keepers who have t heard of Tom Newman, and most of us have arnt that he knows a good thing when he sees it.

Recently his attention has been turned to housg, so when we met at the Harper-Adams' College is was the subject of our conversation, and uickly he seized the opportunity of securing a omise from me to write this article on "Straw ouses."

Experience has taught me that frequently too uch money is spent on housing, with no advantage d often disadvantage to the inmates.

Of course there is the other side of the question, here far too little money is spent; but how often e finds poultry-keepers who have invested pracally their all in housing, and have little left for her purposes? If they only realised how cheaply d effectively their stock can be housed, surely e should see a greater prospect for the commercial egg farmer. The type of house I should ggest is the apex type, say 31 feet long by 13 feet ide, and 9 feet 6 inches to the centre ridge.

Readers, instead of sitting down and reading Eggs," imagine yourselves out in that field of yours, and that Tom Newman has sent me down to help you with the housing of your laying stock. "So you want to build a house here, do you? Is this one of the driest spots we can conveniently use?"



No. 1.—End view of house.

"No."

"Well, poultry houses should never be placed in a low, damp spot! Ah, now this will be much drier here, so go and get some pegs, and, as I have my tape measure with me, we can get on with the job."

Now we want to place the front of the house where it will get the most sun, so put that peg in there, now hold the tape tight and straight and measure off the length and width of the house, putting in pegs according to the ground plan. Now get a spade and dig out the holes for the posts we are going to put in. Numbers 1, 6, 7, 8, 13, 14, 15, 16, 17, 18, 19 should be 3 ft. deep, and the remainder 2 ft. deep. The posts you require can usually be cut out of a big old hedge or wood, and they should be from 3 to 5 inches in diameter.

It does not matter if they are not perfectly straight. Use the thickest at the corners and the the centre of each end.

The posts on either side require to be 5 ft. 6 ins. out of the ground, and the centre posts 9 ft. 6 ins. out of ground.

The bottom part should be creosoted before placing in the holes. Make sure you have the top of your posts all level, in line, and ram them in well.

Poles are wanted to nail on the top of these posts, commencing at No. 1 and following right round the house. These should be about 2-3 inches in thickness; also nail poles, about 3-4 inches thick, on top of the centre posts. Now we require some thin poles about 2-3 inches in diameter, using the thickest for the ends, and these should be 6 ft. 9 ins. long, and 26 of them are required, nailing them on from the corner post to the end centre post at the ridge; repeat this on every post at either side, and then put one in between each of them, as shown in the accompanying plan. Thoroughly creosote the whole of the woodwork, then commence at No. 1 post, as per ground plan, and dig a trench outside, 9 ins. deep, and as close to the posts as possible.

Take a roll of wire netting, 3 in. mesh, or smaller if required for very young birds, 19 gauge, 6 ft. high. Commence at post No. 14, staple the netting on, and carry it right round the house to post 13, taking special care to keep it taut. As the netting always stretches somewhat, it will then be from the eaves to practically the bottom of the trench.

Then get ¾ in. or 1 in. boarding, using two 6 in. boards. Commence at post 1 and run this right round the whole of the house, nailing it firmly to the posts. These boards should be thoroughly creosoted, and tacked on outside the posts, so that there will be about half the board in the ground and half out, as shown in the plan.

Fill the trench and ram the posts firmly.

No. 2.—Front view, showing window and barbed wire fencing to keep cattle away.

Now for the roof! Commence at one end with a roll of wire netting, running it lengthways to the opposite end, pulling the same very taut, and stapling it firmly to the ridge, eaves, and rafters. Repeat on the other side, and then the two ends must be wired over as shown in the plan.

About $\frac{3}{4}$ of a ton of straw will be required for thatching (reed, gorse, or heather may be used instead of straw, but I have not tried any of these materials). Commence the thatching at post No. 14, and carry round the sides of the house to post 13, using single strand galvanised wire, about 17 gauge, to thatch with instead of string.

Next thatch the roof. Wire on the thatch as shown in the plan, taking great care, as with the sides, to make it all very taut, and a ladder will be needed to thatch the roof.

Take great care that the straw where it meets at the ridge is wired tightly together.

The thickness of the thatch should be 3 ins. on the sides and 6-9 ins. on the roof.

With a pair of shears trim off the straw round the eaves six inches from the latter, so that it is protruding over the sides about 6 ins. Also trim off the straw at the bottom of the house, about 3 ins. clear of the ground, i.e., half-way up the board as per plan, and then set about the fitting of the door as shown in the plan, after which the floor of the house must be attended to.

If the situation is at all wet, put in a 3 inch layer of cinders, and on these a layer of thick turf sods turned upside down, and on this a layer of mortar, made of clay and water, 2 to 3 ins. thick. Spread over the sods like cement, and allow a week to dry. In the majority of cases, however, the floor is as well left in its natural state, with a good covering of straw litter.

Having completed the building fix the nest-boxes, perches and dropping boards. The latter should be fixed to the centre poles, the nest-boxes underneath, and the perches on the top, taking care to thoroughly creosote the whole. It is preferable to use iron brackets for the perches to rest upon, like those illustrated herewith. The perch is fastened on with the two screws, and the legs of the bracket stand on the dropping board, making it eas
removable for cleaning, and providing little harbo
for red mite. These brackets might be used w
advantage in nearly all poultry houses.

Experience with straw houses has convinced
that there is no need to worry about parasitic insec
any more than in wooden houses. The inter
can be sprayed if desired with creosote or d
infectant. Straw has a much longer life than t
majority of us realise. When you see a thatch
cottage or barn enquire how often they have to
re-thatched, and I feel sure you will be very su
prised to hear how long the thatch will stand.

The ventilation is much better than in wood
houses, and the stock appears to do much bette
They grow well, lay well, and keep very health
This reminds me that I have never yet seen a ca
of roup in a well-ventilated house that is free fro
draughts and overcrowding, and I very much dou
if anyone else has, except where the disease h
been imported.

No doubt our friend, Mr. Toovey, may have son
remarks to pass on this, though a friend of mi
from Scotland, with whom I was chatting a fe
days ago, assured me he had the same experienc
but thought it was rather a bold statement
make, nevertheless. If I remember correctly th
versatile writer, Mr. Toovey some time ago wro
against this type of house built of wood, but
certainly would like him and many others to se
these straw houses, and the development of stoc
that is kept in them.

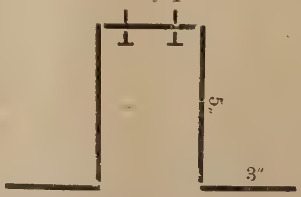
To give some idea how birds grow in stra
houses from one farm where they are in use, o
August Bank Holiday 17 birds were sent to fo
utility shows, where there was keen competitio
and secured the following results :—

> Six Firsts, Three Specials; Silver Cup, be
> pullet in the show; Silver Medal, best bird
> the show; Special for best cockerel in th
> show; Five Seconds; Three Thirds; Two R
> serves; Two V.H.C.'s.

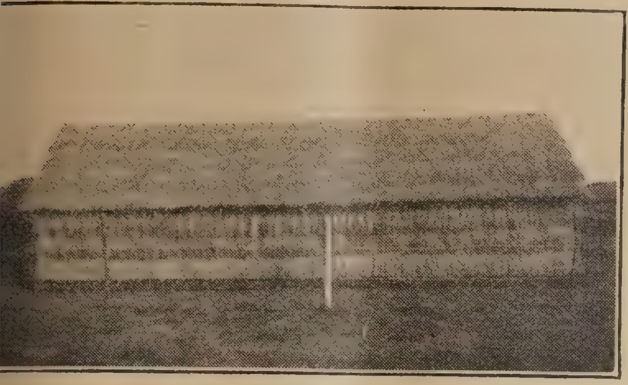
Whether we believe in utility showing or no
most of us are agreed that to win with chicken
as all these were, they have to be well grown an
in condition.

Eggs from stock kept in these houses hatc
well, and the chicks rear well.

The houses themselves are warm in the winte
and cool in hot weather. Here I did intend to pu
the words "in summer," but last season come
back to my mind, when it was so wet, and th
straw houses stood this exceptionally well.



Perch Bracket referred to in previous column.



No. 3.—Back view of house.

I hope these remarks and the accompanying illus- ations are sufficiently clear to enable any readers erect a straw house if they desire, but I shall very pleased to give further details, or to make rangements for a personal inspection of some of ese structures.

I recommend the latter course, and I can point at least eighty straw houses that have been ilt after following my advice to come and see em.

Here are the costings of the straw house 31 ft. 13 ft. These costings have not been worked t specially for this article, but are the actual ures of one that was built on a poultry farm in oucestershire, where all the materials, etc., had be purchased, and labour had to be hired :—

	£	s.	d.
Timber	6	0	0
Straw	2	10	0
Netting, nails wire, etc. ...	2	8	0
Labour	4	10	0
Total costings	£15	8	0

This includes a barbed-wire fence round house.

If a general farmer built this house most of the aterials he would have without purchasing.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression at they must necessarily be scientists, pedigree eeders, or farmers on a large scale to render emselves eligible for membership of the S.P.B.A. is idea is quite incorrect. The S.P.B.A. is out assist all grades of poultry-keepers, from the oprietor of the 10,000-hen farm to the intensivist th his dozen or so birds; all are entitled to equal nefits. The Five Shilling subscription brings th it many advantages, namely : Free Advice by st, a Copy of the Annual Register, the Benefits the Discount System, and many other vantages too numerous to mention here. You ould write for full particulars to the Secretary,)M NEWMAN, The Beeches, Rudgwick, rsham, Sussex. The financial year began on t September.

Modern Poultry Feeding.

By TOM NEWMAN.

THE S.P.B.A. EXPERIMENTAL FARM.

The Committee has not yet met to decide upon the experiments which are to be undertaken when the plant is ready at our experimental farm ; so that what I am about to write must be taken as merely suggestions of what may be done.

It seems desirable that the experiments should be directed towards discovering the most economical methods of feeding. I am using the word "economical" advisedly, as distinct from merely attempting cheaper feeding, which would not necessarily be economical.

Recently I was offered fish meal, 55/60 per cent. albuminoids, 3 per cent. salt, and 4 per cent. oil, at £20 5s. per ton. Pure meat meal, 56 per cent. albuminoids, at £20 per ton ; another sample at £18, and a sample of meat and bone meal at £15 per ton, all F.O.R. Which would be the best value to the egg farmer? Frankly I don't know. I believe, and have good grounds for the belief, that the meat and bone meal with its 42 per cent. albuminoids is the best proposition. That is to say, that the higher cost of the other foods is not warranted by any increase in production, nor can it be demonstrated that the health and vigour of the birds is any better on the higher priced fish and meat meals. I know that blood meal with its 75 per cent. albuminoids will not give me any better results than a good sample of meat and bone meal, and the question arises as to whether or no we have been paying too high a price for our albuminoids. The indications are that we have been doing so. Further, there is the question as to the minimum quantity of these expensive foods it is necessary to use. Shall we get as good results on 5 per cent. as on 10 or 15, or even 20, if combined with a good vegetable protein such as soya bean meal, to mention only one? The experiments at Wellingham with soya bean meal were suggestive if not conclusive. The pen which led at the finish were given 3 per cent. fish meal only, and they led not only in production, but in condition. As hinted before, we have discovered a foodstuff which it is desired to test There is every reason to believe that the results will be satisfactory, reason to believe that it is superior to other foods we are at present using, and it is cheaper. Turning to other things, there are chick feeds ; they are very expensive at the present time ; are some of the more expensive seeds necessary? What experiments have been made to demonstrate that a chick feed is any the better for the inclusion of such an expensive ingredient as CANARY SEED, for example. Four years ago at Harper-Adams I suggested that we were wrong in giving chicks seeds which were difficult of digestion, and I instanced canary seed. I did not say it was indigestible, but that on account of its hard indigestible husk it was hardly a suitable seed for the tender digestion of a young chick. Why is it included in most dry chick feeds? No one has proved its value, no one has demonstrated that chicks have grown more rapidly, thrived more, because canary seed is one of the ingredients in the dry feed. Probably it is the old story of the value of the chick feed being calculated on the albuminoid ratio, and it was included for this reason. The same remark applies to hemp seed. I write thus because I have myself recommended these seeds, and am frankly admitting it. What I want now to find out is, whether these high-priced seeds are necessary or not. If a good mash is fed, I cannot see that they are, but we have to prove it. Is such an expensive feed as groats, split or otherwise, justified? Especially is it so if ground oats are fed in the mash? I may be told that these are all "tried" foods, and that we should not discard them lightly, neither should we do so, but if we make a comparative test we shall find out whether they are justified or not. If we prove that they are justified, then we shall be satisfied, and there will be no regrets if we prove they are not; it will make a very considerable difference to the cost of rearing chicks and to the cost of production. It is no concern of ours that Canary seed has been fed for years without **bad** results, or, if you will, that **good** results have been achieved when canary seed formed part of a dry chick feed. What we want to discover is whether or no we have reared better and mo vigorous chicks BECAUSE of its inclusion. T same remark applies to fish meal and the mo expensive meat meals.

Mrs. Porter-Porter's Champion hen, the highest official record in any recognised laying test, 320 eggs in 48 weeks.

I have been extremely interested in what M Edward Brown has to say in "Feathered World in reference to the complaints from "Petalur of Pale-Yolked Eggs." So bad has the troub become that attempts have been made create a demand for these anaemic eggs, Mr. Brown describes them, and when th have to resort to that, one may be pe fectly sure that things are bad. The cause h been attributed, and I think rightly, to intensivis It would perhaps be better to say intense intens ism. The conditions were once described "Eggs" by Mr. Fred Fielding, and the numb of birds carried to the acre was astoundin Chicken Pox appeared rife among these flock and the probabilities are that the whole of t trouble, including the disease, is due to dietet deficiencies. Lack of fresh green food would the most probable cause of these pale yolks, f try as we may we can find nothing which w actually replace it. Pale yolks are, to so extent, due to constitutional trouble, but th frequently arise from deficiency of colouri matter in the food, and it would be easy to fe a hen in such a manner that she would lay eg with perfectly white yolks. One case which ca to my notice some three years ago was distinct due to the feeding, which was: Ground oats, mi dlings, fish meal, barley meal, with wheat as t grain. The birds were kept in earth runs, a very little fresh green food was available. Ki bled maize was substituted for wheat, the barl meal replaced with biscuit meal, clover meal add to the mash, and an iron tonic given. This r sulted in a great improvement. One suspects th the trouble in Petaluma mainly arises from a d ficiency of iron in the ration.

Mr. Brown mentions that a nutrition experime indicates that birds fed on white Indian co become anaemic and die off. One would like know further details. At any rate don't let condemn white Indian corn until we do—there m be some explanation.

The objection to the yellow-skinned birds f table fowls might be largely overcome by judicio feeding. It is quite possible to feed a yello skinned fowl in such a way that the colour wou be almost unnoticeable. One wonders that th matter has not received more attention.

In the "New Zealand Poultry Journal" menti is made of an experiment with birds on a fr choice ration, as against others whose ration w mixed for them. The former did best, which w not surprising, having regard to this mash. is to be hoped it will not be accepted as a la that birds having free choice of foods will gi better results than those whose rations are pr vided for them.

Answers to Queries.

By the EDITOR.

DUCKS.

v. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

dies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

aders are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

plies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

LL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

"Beginner" (Cardiff) has bought a text book on ultry-keeping, and now writes to me to explain what e author means. She is fattening some cockerels Sussex ground oats and sour skim milk, as the thor recommends, and wishes to know in what proportions the ingredients should bear to one another. hen the author says there are two methods of feeding—dry and wet mash systems. My correspondent as adopted the latter, in which grain is given in the orning, and a wet mash in the evening, but she sks: "Are the birds consuming enough? but the uthor says something about a hopper of dry mash eing available. Does he mean as well as the wet ash ration? The birds all look strong and healthy." Beginner" is anxious not to make mistakes. With gard to the fattening of the cockerels, Sussex ground ats should be mixed with the sour skim milk to a rumbly moist consistency. I cannot say in what roportions the milk should bear to the oats. As to e system of feeding, I would much prefer to give e wet mash in the morning, and the grain feed at ight. However, it is a matter of opinion, and "Beinner" must learn by observation to see the amount f food her birds require, as a growing pullet or one roducing eggs will require more food than one which not producing. Roughly they should be given two nd a half ounces per head of mash, weighed when ry, and two ounces of grain at night, as the last ed (that is the meals in the mash should be weighed efore scalding). I do not think while wet mash feeding is adopted, that it is any advantage to have dry mash in hoppers as well.

E. E. P. (Dorset) asks the best way to disinfect incubators, chicken houses, hovers and brooders after Coccidiosis. I do not think there is much possibility of the incubators being infected, but if my correspondent wishes to avoid any risk, the best method is by fumigation, which should be as follows:—This method of disinfection is trustworthy when the air temperature is 65 degrees Fahrenheit, or over, and the atmosphere is humid. The incubator should accordingly be placed in a warm room; it should be well moistened inside, and a little water left in the bottom. Every exit from the chamber should be pasted over with paper, and, before finally closing, a metal vessel should be inserted containing permanganate of potash crystals, over which double the weight of commercial formalin is poured. The incubator should then be finally sealed up, and not opened for three or four hours. Two ounces of formalin and one of potassium permanganate are sufficient for every five cubic feet. The same procedure may be adopted with brooders, which are, however, more troublesome to make air-tight. Another method is to thoroughly swab or spray out incubators and brooders with methylated spirit. With regard to the house. Thoroughly spraying and creosoting would be the best means, or white-washing, using ¼lb. crude carbolic acid to every gallon of whitewash. What is of far more importance than disinfecting incubators and brooders, is to disinfect the land outside the house, and this should be thoroughly limed at the rate of two tons to the acre, and rested for a full twelve months. On the question of giving sulphate of copper in the drinking water as a preventive for eye roup, I do not think you can give anything internally which will prevent roup. Sulphate of copper is a powerful astringent, and my correspondent should continue to use it while there are any signs of roup, but in the following proportions:—Dissolve 4 ounces

"Gloster Promise." Bred and owned by the Misses Ransford. Best individual Leghorn in the Five Counties Laying Test—265 first-grade eggs in 46 weeks. Complete record 300 eggs in twelve months—all first grade. Photo taken on return from test of sulphate of copper in a quart of water, and add one ounce of the solution to every gallon of drinking water.

E. M (Herts) sends a sample of meat meal, which contains a good deal of hair and hide, and I do not consider it good value at 18s. She also asks for a wet mash for birds on free range, in cwts. Would advise her to use 4cwts. toppings, 1½cwt. maize meal, ½cwt Sussex ground oats, ½cwt. meat and bone meal. In reply to her statement that other people's eggs are lighter than her own. This may have a good deal to do with the fact that they are kept in confined runs, while her birds have free range.

F. K. (Shipley) wishes to know whether he could use Palm Kernel Meal (extracted). He uses some for his cattle, and he would like to know if it would be economical in a poultry mash. Extracted Palm Kernel Meal was used a great deal during the war, but there was some difficulty in inducing the birds to eat it, and it is very unpalatable. My correspondent should introduce it very gradually at first. It might be fed in substitution for half middlings or thirds. Our first experience with it was that it scoured the birds very badly, if not gradually introduced. Further, that it threw them off their food. A mash could be made up of :—2lbs. Bran, 2lbs. Middlings, 2lbs. Palm Kernel Meal, 2lbs. Maize Meal, and 1lb. Meat and Bone Meal, but I would suggest that it would be well to start with half part of the Palm Kernel Meal in the first place, and gradually increase it.

H.T.B. (Thornton Heath) wants a good dry mash for R.I.R. pullets, hatched last week in April. He also wants to know when they should be reasonably expected to commence laying. The birds are kept on the intensive system. Also, a good grain ration to give with the mash, and a fattening mash for R.I.R. cockerels which are going lanky. A dry mash ration is also required for a pen of White Leghorn hens which have come through the moult and look yellowish. The following will be the best mash for the R.I. Red pullets:—1 lb. alfalfa meal, 1 bran, middlings, 1 Sussex ground oats, 1 maize meal, and 1 meat and bone meal or fish meal. Grain ration, equal parts kibbled maize and wheat; two ounces of grain as the last feed. For the cockerels—these should be shut up in a house which is a little on the dark side, and kept perfectly quiet. A good food to put on flesh would be boiled rice, dried off with Sussex ground oats, and the following mash, mixed if possible with sour milk :—3 parts middlings, one part barley meal, one part Sussex ground oats, and ½ part maize meal (if skim milk is not available, ½ part meat meal should be added). Care should be taken that all food is removed which the birds do not clear up in quarter of an hour or twenty minutes. With regard to the Leghorns. This pen seem to have come through the moult well. They should be given plenty of fresh green food. The same mash as advised for the R.I. Red pullet would answer. The yellowish appearance is no necessarily a sign of liver trouble, but a dose o Epsom salts would do them good. Give plenty o scratching exercise. The best grain to give ther at present would be good sound oats.

P. W. K. (Penare) recently bought a pen of Bu Orpington ducks, consisting of a drake and thre ducks. On arrival there were three eggs in th crate, for the next three weeks they ceased to lay and since that time he has had one egg per da from the pen regularly. The ducks were hatche January, 1925. They are being fed in the mornin on the following mash, by measure :—Two part middlings, one part Sussex ground oats, one biscu meal, one bran, and half fish meal, with th addition of one ounce of fat per bird per diem He allows six ounces of mash per bird. Thei evening meal consists of one ounce wheat and on ounce oats per bird, fed in their water troughs on hour before sunset. He wishes to know whethe this mash is a correct one, and when he may expect the pen to be in full lay. Ducks are ver nervous birds, and it sometimes takes them sever weeks to get over a move. The feeding is correct except the addition of one ounce of fat per bird pe day, as the mash in itself is sufficiently fattening and the quantity more than sufficient. If m correspondent does not look out he will get th birds in an overfat condition. I would suggest th addition of another two parts middlings, and th omission of the fat.

E. G. S. (Surrey) sends sample of fish meal— No. 1, at 26s. cwt., the quality is good enoug but the price is very high; No. 2, at the sam price, is rather better, but surely "E. G. S." woul do better to buy through the S.P.B.A., where h could get it in five cwt. lots at 19s. 6d. f.o.r.— quality unsurpassable. The sample of alfalf meal at 18s. cwt. is a good one, but again th price is too high; this is not economical feeding The maize meal at 14s. is excellent Broad bra at 11s. is not broad bran, but ordinary bran whic has been passed through the rollers twice. Th middlings at 10s. are only moderate. Susse ground oats at 17s. are best value of all the sample sent. If "E.G.S." is to make poultry pay h certainly must buy more economically than he doing.

UTILITY DUCK CLUB.

The Annual General Meeting will be held in th Club Room at the Dairy Show, Agricultural Hal Islington, on Thursday, October 22nd, at 1 p.m. when it is hoped as many members as possibl will endeavour to attend.

The Club Stand is No. 217 in the East Gallery the same position as last year. Members are invited to come and have a chat with those in charge and also to bring their friends.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

ANNUAL GENERAL MEETING

be held in the Council Chamber, Holborn estaurant, October 21st, 1925, at 4.15 p.m.

AGENDA.

esident's Introductory Remarks.
nutes of last Annual General Meeting.
cretary's Report.
easurer's Report.
Eggs" Committee's Report.
solutions by :--
(1) P. S. Campbell.
(2) Wadhurst Branch.
(3) W. H. Farnell.
(4) F. J. Hemelryk.
(5) Liverpool Branch.
ction of Officers.
clare result of ballot
for Council.
easurer.
ditor.
esident.
estions.
y other Business.
tes of thanks.

What IS Ventilation ?

THE APPLICATION OF THE INDUCTION PRINCIPLE AND ITS AID IN THE PREVENTION OF DISEASE.

By C. WINTHROPE SOMERVILLE.

It is nearly a year since I contributed some remarks on the subject of health by ventilation, which were, as then stated, the outcome of efforts to secure better hygiene in the direction of the adequate ventilation of chambers and buildings for housing poultry from infancy upwards.

As the matter seems to have aroused considerable interest among those of the industry who consider scientific efficiency worth while, and as the efforts and suggestions I have made towards improved methods in this direction have been so generously received and commented upon, I propose to elaborate my previous article by some remarks on structural and other considerations for the application of the system of Ventilation by Induction.

For some time past the industry has gradually become alive to the vital necessity of a more perfect system of ventilation than the prevailing one which, in a large measure, reverses the true pro-

"LADY ERIN."

A UNIQUE TRIO.

The illustrations here given are unique. The three birds, the property of Mrs. Strong, are "Lady Erin," who laid 311 eggs in 12 months in the Irish Laying Test, 1917-18 her daughter, "Royal Meath," another World's Champion, who laid 309 eggs in 12 months in the same Test, 1919-20, and "Lady Erin's" grand-daughter, who laid 293 eggs in the same Test in the years 1920-21.

"ROYAL MEATH,"
daughter of
"LADY ERIN."

No. 187,
grand-daughter of
"LADY ERIN."

cess by supplying a mass of fresh, and often cold, air above the birds' heads—thereby keeping the foul gases below them—instead of bringing it in from below and causing its continuous ascension by natural laws.

Newman, in 1919, found the necessity for proper ventilation in connection with brooders under anthracite stoves, and adopted a platform made of slats *under* the hover. Unaware of his innovation I, much later, adopted a similar principle for use in chamber brooders, using a perforated or open floor-bed with an air reservoir *below*.

VENTILATION versus CIRCULATION.

I have in front of me the advertisement of poultry appliances, in which one of the qualifications is given in words to this effect : " Perfect circulation of air, and therefore perfect ventilation," and in all cases the air ports are above the heads of the birds and not any below. One sees many such statements, and they are characteristic of the misconception as to the nature of ventilation and its application by many appliance makers to-day.

CIRCULATION IS NOT VENTILATION AND NEVER CAN BE.

Too much stress cannot be laid on this fact, because the grave confusion which seems to be so prevalent on the point is possibly responsible for many of the poultry ailments and diseases.

The very definition of the word ventilation should preclude any misconception. " Vent : to let out."

CIRCULATION AND DIFFUSION.

Ventilation begins at the bottom and ends at the top. No plausibility on the part of a manufacturer of ill-considered, haphazard appliances can alter this hard fact. And you cannot vent at one end without letting in at the other.

With any type of house in which the air ports are above the birds' heads and fresh air is forced in, you will get **circulation** in the form of swirling eddies creating strata of mixed, foul and fresh air at varying levels till eventually diffusion—wholly or partial—occurs. But you do not get rid of the **foul** air, some must always be present unless a through current is created, and that can only be done by **draught.**

Ridge ventilation in such cases will only aggravate the defect since the density of the foul air below the open port is increased by the cooling effect of the incoming cold air, while the lighter hot air escapes at the ridge, creates a vacuum just below the level of the cold air ports, and cold air enters to fill it, thereby keeping all space below that level unrelieved of foul gases.

This is elementary physics ; natural laws which every designer of buildings for housing animal life should know, yet it is ignored in nearly every manufacturer's catalogue of poultry appliances. This subject of circulation and diffusion has been ably dealt with in a recent article in " Eggs," entitled " The Importance of Proper Ventilation by an unknown writer.

VENTILATION.

Ventilation begins at the bottom and ends the top. This is a hard fact, and one of vit importance in all modern structures for habitatio

It may be taken as an axiom that fresh air shou enter at the lowest, or nearly the lowest, level any building and the foul air escape at the highes

There are two ways of effecting this, the natur and the mechanical. The former is based physical laws, or, to put it in another way, tho due to natural phenomena, and costs nothing ; t latter is accomplished by machinery in some for and therefore requires power, which costs mone There are cases in which for certain purposes is forced in, but such come under the catego of " forced draught," which is a totally differe thing.

It is well to remember that in all cases of ven lation within the strict meaning of the term t fresh air should be " induced " or pulled in, b when a current created by mechanical means of such intensity as to cause draught then anoth name must be applied to the process, because in perfect system of ventilation there cannot draught.

INDUCTION.

The *simplest* form of ventilation is that in whi a current of air is induced to enter a building natural laws and enabled to escape by natur laws. The expression " ventilation by induction is, then, hardly correct since induction is natural implied, but in the present state of confusion serves to differentiate between the true system a that poor substitute circulation.

Draught in any form is inadmissible ; indeed, is no exaggeration to say that it is deadl Diffusion of the foul air with fresh air is litt better. What is required is a **continuity of upward current of fresh air to replace ejected fo air.**

Natural laws enable us to secure this desider tum with the greatest facility, providing certa structural conditions are observed ; and these co ditions may be embraced in the one wo " Induction."

THE VITAL NECESSITY.

In all cases where animal life is housed und confined conditions it is of the most vital i portance to get the foul air away, **and to get away quickly.** To accomplish this the question structural design has to be carefully considered.

STRUCTURAL DESIGN.

The system of ventilation by induction may successfully applied to two forms of poultry hou design ; the vertical-sided with span-roof, or t triangular roof-sided, in which the sides are slop at a certain angle. I do not know of any way which it can be applied to the lean-to type.

Of the two available types the triangular, or as is popularly called "Apex" house, lends itself e better to the purpose because it is, as described my article of October last, made to conform to e shape of an induction cone.

I give below a diagram of a span-roof building, id enclosed within it in dotted lines that of the iangular structure. This will illustrate the olution of the "Apex" house of correct design id the reasons for it.

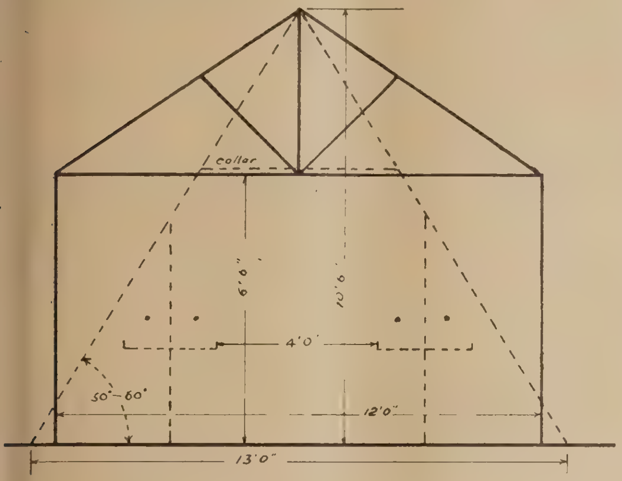


DIAGRAM I

The span-roof structure is perfectly satisfactory every way providing the pitch of the roof is fficiently steep, and providing also that there is ridge vent of the ejector type, air-inlets below e perches, and not too far above floor level, **but apertures between the birds' heads and the lge.** But there is the very great objection to e increased cost of construction involved in the inecessary cubical content, as shown on each le of the triangular design. This space is not ways necessary, and for laying and sleeping of use to the birds.

COSTS OF CONSTRUCTION.

To make a brief comparison of costs let us take e set of principals and struts as shown in the oss-section diagram.

In a span-roof design of twelve feet floor width cannot use less than 3 x 2 timber section, and easured up this comes to approximately 50 feet n. In the triangular design the principal memrs need not be greater than 2 x 2 section, and have only 35 feet run and 5 feet of 2 x 1 for llars. The difference is even greater since rtical struts are required only at every eight feet. ith regard to the roof and sides of the span-roof pe the cost is even greater in proportion when nsidering the materials used. So that with a ilding of infinitely greater stability a much lighter amework can be employed. The lean-to type house, in which ventilation (so-called) is effected indifferent circulation and diffusion, the absence roof trusses makes it cheaper than the spanof, but the cost is still 25 per cent. greater than e triangular. And here the popular idea is to put a huge and expensive hood in front of the house to **keep the weather out** from a large wire-netted aperture provided for the purpose of **letting the weather in!** Result, a constant anxiety in windy weather as to how long the roof will remain in its original position.

TYPES.

To what extent the triangular may be used in place of the span-roof type is, just now, rather a vexed question.

Why this should be so I do not know, because reference to the diagram I. will show that with the exception of a wider gangway between the perches—the advantage of which is questionable—the extra space available, i.e., that outside the dotted lines, is absolutely non-essential unless, as a correspondent to "Eggs" recently stated, "it gave one plenty of room to put things." What things? If a poultry house is to be utilised as a store of any kind, then we have one of the cases in which the span-roof type might be necessary to serve a dual purpose.

The same amount of lighting, head room, and floor space can be secured in the triangular type, as the diagram shows, remains then the gangway space. With a twelve-feet width of floor, is three or four feet enough for a gangway?

POISON GASES.

Carbonic acid gas is the chief constituent of the exhalations of animal life; accompanied by it are many other noxious gases; re-inhaled these act as deadly poisons on the system. However particular one may be in the matter of clean droppings boards there are periods during the night when birds are subjected to the odour arising from their manure.

NASAL INFLAMMATION AND ROUP.

Mr. A. H. Brain, an authority on poultry diseases, makes the following impressive statement in an article commencing in "Eggs" of September 16th:—" . . . the origin of all diseases of the respiratory organs is, in the beginning, cold, or simple nasal catarrh. . . . . The causes contributing to this ailment—at first so simple—may generally be found in the system of housing. Insufficiently ventilated pens, or, on the other hand, over ventilation, where cold air sweeps continually across the birds, either while they roost or in floor draughts, catching them from all sides, cause running nostrils, and if these are not attended to, quickly clog, inflammation of the membrane sets up, and finally results in roup."

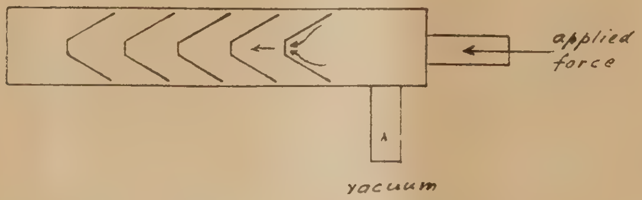
VENTILATION BY INDUCTION.

Continuous; unending; self-generating. Never too much; never too little. Could anything be more desirable?

Before dealing with the advantages of ventilation by induction I would briefly point out two essentials for securing the greatest efficiency:—

(1) The pitch of the roof should not be less than 50 degrees, the idea being to follow the shape of an induction cone, a rough diagram of which is given below, and there must not be the least resistance at the vent.

DIAGRAM 2.



The force applied being that of water, steam, or air.

Now flatten the angles to a more obtuse degree as in diagram III.

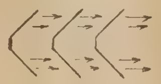


DIAGRAM 3.

and instead of the force being gradually **inclined** to the orifice, repercussion, or a driving back, occurs.

In a poultry house where the force is the ascending hot and foul air this repercussion causes "banking." The banking is aggravated by the prolonged contact of the hot air with the roof, and the consequent cooling tending to increase the density.

(2) The air inlets should be a little distance above floor level, and the total area of the intake bear a certain relation to that of the vent or escape.

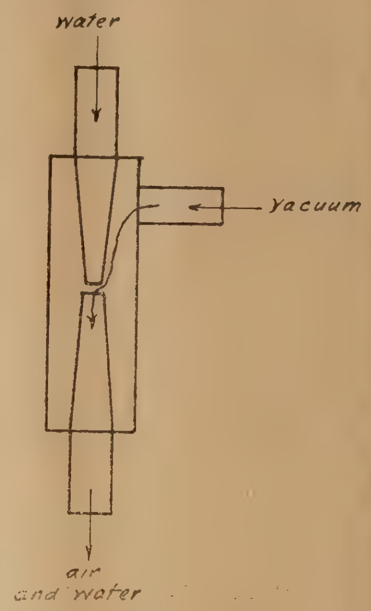
With the induced air current system there should always be a "pull" at the air inlets, otherwise there is a liability of getting disturbance **inside** the house from atmospheric conditions **outside,** and this is to be avoided.

If the air ports are too big or greatly in excess of that required for an automatic stream swirls, eddies, and draught are the result, and the induction effect destroyed. Also, too great a mass or body of cold air at the bottom of the house militates against the induction.

It is most desirable that there should be a steady continuity of current without disturbance or interference of any kind, and it is only by careful consideration of such details that it is to be obtained.

The area of the intakes should be **less** than that of the vent, but the vent should be ample for the purpose, and of such shape that the induction cone principle of the water-jet vacuum pump type is used to aid in the ejection of the foul gases, as shown in my article of October last.

DIAGRAM 4.



If the air is pulled in by a system of gentle currents the paths of these curve upward, and in so doing create a secondary induction from t
middle of the floor towards their stream lines, ar
a state of circulation probably occurs here, b
of **fresh** air, not foul.

RELATIVE AREAS.

With regard to the relative sizes of the a
intakes and vent there was, of necessity, boun
to be a certain amount of guess work in the calc
lations for these since no text-book informatio
precedent or facts about the matter were availabl
Pitot tube, anemometer, or similar instruments f
estimating the rate of flow, etc., of air into a
out of the house could not be applied in su
a case, so it was decided that an estimation
temperature above and below the birds mig
serve the purpose. A slight rise in temperatu
in the upper levels is sufficient to provide a rap
uplift, but too great an increase would indica
"blanketing" or the collection of foul gases und
the apex.

ADVANTAGES OF THE INDUCTION SYSTE

Braving the risk of being criticised for mon
tonous repetition in these pages, I herewith brief
recapitulate the advantages to be secured by t
induction system of ventilation. And I may he
state that the process is no longer in the pure
experimental stage. Houses embracing the sy
tem, of twelve feet width and from eight to sixt
four feet long, and others to hold five and s
hundred birds, built in accordance with principl
of the design given in "Eggs" of October, 192
have been in use for many months

The following advantages are to be secured fro
the system :—

(1) Automatic self-ventilation. The great
the number of birds—up to a certain limit—t
more fresh air is automatically supplied b

reason of the greater mass of ascending hot air.

(2) Complete absence of draught and independence of outside weather conditions.

(3) No manipulation of shutters or windows 'or ventilation purposes according to weather.

(4) Economy in capacity. A house twenty eet long by twelve feet wide will accommodate 160 light breeds or 135 heavy breeds.

And if of triangular design there may be added:

(5) Simplicity of erection and extension.

(6) Minimum cost of construction.

ch incidentals as reduction of attendant ir, dust bath, and rain shelter are useful acts.

THE DANGEROUS CONDITION.

is a desirable enough feature to be secure draught in windy weather, but there is ier, and most important, view to be taken in pposite direction.

all know the hot "muggy," breathless day ght when the air is saturated with moisture, there is no movement of air outside or inside ouse. This is when birds really suffer if they onfined in a stagnant, foul atmosphere.

w, with ventilation by induced current there be movement or air **inside** the house. Heat the birds themselves is of a higher temperathan the surrounding (outside) air, and by n of its ascension to higher levels static cons below are an impossibility; fresh air must in from below. The temperature of this ing air may be the same as that outside ouse, **but it is fresh.**

ain, in hot weather when the rays of the sun e roof and sides of the house have created a internal temperature, we gain a further tage from the fact that the position of the ings boards prevents a lot of radiation to the levels, while the accumulated heat creates a er uplift in the upper levels, thereby tending crease the pull at the air inlets. Very ent is the case where the air inlets are above rds as has been shown.

this system of ventilation—given the proper ies—by natural laws the foul air **must** escape; refore follows that by natural laws fresh air take its place, and without windows, shutters, to aid, abet, or deter it.

SLIDING DOORS.

ne criticism has been levelled at the use of g doors for poultry houses.

e you ever tried them in comparison with the d swing door? Mr. Martin Grey and many s are as emphatic in their superiority as I A sliding door **will** "stay put," but a swinginged door in a wind when both hands are ied—well, what **won't** it do?

CONTINUITY OF CURRENT.

This is one of the greatest factors in the successful ventilation of poultry houses.

I have no hesitation in saying that to get it by any other means than a flow of air from **bottom** to **top** of the house is a practical impossibility. And not only is an unceasing continuity desirable, but it is essential that it should be present in the same degree of intensity over the whole **length** of the house when the doors are closed. It should not be greater in any one part otherwise short circuiting is indicated.

Where open windows and apertures are above the roosting birds along the length of the house there is a great liability of different pressures from varying slants and angles, and in this way there occurs sudden "sweepings" of cold air over the birds.

I have experienced in a sixty-miles-an-hour gale that in a house twenty feet long there is no variable movement of air inside, and that the particular type of vent prevents any down-draught. And I have just received a report that in a sixty-four feet house there is a perfectly even continuity of current over the whole length. This, surely, is an asset.

PROOF.

In proving the efficiency of a ventilating system of this kind smoke tests are fairly conclusive for a small house; they are, however, of short duration. A continuous proof is more satisfactory, and this has been furnished in my own practice in a rather curious way, which leaves no doubt that induction and a continuous upward current is present for all time.

On the collars, or cross ties, just above the head wire netting has been fixed to prevent the birds perching thereon. On the **underside** of this netting a suspended coating of the fluff-dust incidental to a dry poultry house accumulated to a depth of a quarter of an inch or more in six months, but the **top-side** of the netting is quite free; and there is no dust on the top of any of the horizontal timbers in the house.

Throughout a length of twenty feet (the size of the house) this suspended dust is evenly distributed, thereby showing a lateral continuity of current of uniform velocity. Such facts provide decisive proof that the upward current is continuous, unceasing.

APPLICATION TO THE SPAN-ROOF HOUSE.

In applying the system to the span-roof type of house it should be remembered that owing to greater cubical content of the vertical-sided structure there will be parts of it (indicated outside the dotted lines in diagram I.) filled with semi-cold air, and as that has to be moved by the force of the ascending foul air some of that force is absorbed in accomplishing the work; so that it is quite possible that the rapidity of the ventilation will not be so great unless some particular form of roof construction be adopted to counteract the defect.

Some experimental work is necessary in this direction, and is now being carried out. It may, if acceptable, be the subject of a later communication.

REDUCE THE CUBICAL CONTENT.

Given the necessary floor area, it is very obvious that the less the cubical content above the birds—unless for some special purpose other than housing birds—the better, and for this reason the triangular is the better form of house.

It would seem that the only possible reason for excessive cubical capacity in a poultry house is to provide an ample reservoir of breathable air, but since the inhabitants are unable to adjust the apertures for the admission of the air **according to weather conditions** the provision more often than not defeats the object by maintaining a strata of cold air just when and where it is not wanted; and, as I have pointed out, the only means of shifting this "blanket" is by **draught.**

FLOOR SPACE.

In the triangular house to my design the floor space was decided by a convenient width of gangway in the centre. Allowing 3-4 feet for this and a sufficient width of droppings board to serve a double row of perches each side, at a given height above the floor, twelve feet width of base seemed to be the maximum required.

Unless one is limited to space in a lateral direction, I see no object in a greater floor width. There is, however, nothing to prevent the widening of the base of the triangle—always remembering that the wider the floor the higher the building if the same side-angles be maintained—and the stability will in no way be affected; and in this direction the triangular possesses a great advantage over the vertical-sided house.

HEALTH AND PRODUCTION.

It may appear to a few of my readers that in some of the foregoing considerations there is, for poultry work, a tendency to "split hairs." Is there? Read the recent articles in "Eggs" by Mr. A. H. Brain!

What is demanded of high-grade birds to-day? It is possible to secure and maintain a flock average in pullet year of over 225 eggs per bird without culling or trap-nesting. This may be good, bad, or indifferent; I do not know, since the poultry industry has no standards of comparison to which one can apply, but I think I am correct in saying that the standard of to-day is very much higher than it was, say, twenty years ago, and is still increasing.

Now, if this increase continues are we not puting the natural functions of the birds—male and female—under abnormal strain? And, if so, surely it is absolutely necessary to provide every possible favourable condition to maintain their health and stamina. Witness the case of London cab horse in a recent article.

From what little I know of poultry work— I confess that it **is** very little of such a comp subject—I have found birds to be very sensiti and respond very rapidly to good or bad conditi of feeding, housing, environment and gene management. And the more **intimate** care give them the more they will do for you. So almost any animal.

DISEASE.

In the "Daily Mail" of August 1st, 1925, th is an article entitled "Feeding and Housing Laying Test Birds," by J. N. Leigh, the w known poultry expert.

In a very interesting description of the way which the Egg-Laying Test is carried out Bentley, he says that each pen of seven birds 150 square yards of grass land, and as far as can judge, with the exception of the type of hou the conditions for egg-laying seem to be v favourable.

Towards the end of the article one reads th words: "All grain is thrown into the litter, wh is renewed periodically, **but on the first sign any infectious trouble it is scattered broadc over the grass runs."** The emphasis is mine.

This statement has impressed me very much. read every one of Mr. Leigh's Saturday artic and appreciate them as coming from the pen an expert.

At the first sign of any infectious trouble . .

Ye gods! Why **wait** for the infectious troub One **waits** for a thing they **expect!** And why i expected? Surely because experience has tau us to expect it. I think Mr. Leigh has contribute very valuable warning.

On account of illness two years ago I was una to attend to my poultry houses for two mont My largest one was due for re-littering long bef I was fit to do it. The first day I was able to f the birds I threw grain into the house as usu and when I saw the clouds of dust—which m essentially consist of broken litter and dr manure—raised by the scratching of the birds gave me what the French describe as "furiou to think."

From that day I gave up the practice of thr ing grain into litter in the houses.

Surely it is wrong? It must be wrong! Lit even a week old must contain a lot of such du How can a bird breathe it with impunity? And they have ample grass land, why throw grain i the house? In semi-intensive work why encoura birds to stay in the house?

It is a very different matter if the litter be the open, as there is generally sufficient moist in the atmosphere to keep it slightly damp; a as in the case of a hen on a "midden," a b will select; how it selects, lord only knows, but does.

s Mr. Newman truly says, you cannot keep a from drinking from a foul puddle in prefer- to clean water in a trough, they **will** do it; it is to a very great extent within our control eep them from inhaling dried manure dust.

THE STEP FORWARD.

conclusion, may I say that in offering this new em of ventilation, although it has been tried, ed, and passed under both small and large- e conditions, I am far from suggesting finality erfection. It has, at least, opened up a new ue of thought towards better hygiene, and is all to the good; and I personally greatly reciate all the useful and helpful criticism and h-needed discussion it has created.

rogress, the step forward from the stagnant obsolete, is desirable in all industries, but its e is enhanced when it is accompanied by ater economy, efficiency, and simplicity.

IGHTS OF GRAINS AND MEALS PER QUART MEASURE.

COMPILED BY TOM NEWMAN.

lfal:a Meal.		Bran (ord.).			Broad Bran.		
Ozs.	Dms.	Lbs.	Ozs.	Dms.	Lbs.	Ozs.	Dms.
9	7		6	3		4	12
9	0		6	2		4	4
9	0		6	3		4	4

Middlings.		Sussex Gnd. Oats.			Barley Meal.		
Ozs.	Dms.	Lbs.	Ozs.	Dms.	Lbs.	Ozs.	Dms.
0	3	1	0	0	1	2	2
15	5		15	8	1	1	14
0	4	1	0	0	1	2	2

e Biscuit Meal.		Large Biscuit Meal.			Maize Gluten Meal.		
Ozs.	Dms.	Lbs.	Ozs.	Dms.	Lbs.	Ozs.	Dms.
15	12		15	8	1	5	10
0	6		15	13	1	4	14
15	12		15	8	1	5	4

t Meal (Lasco).		Fish Meal (Nitrophos).			Maize Meal.		
Ozs.	Dms.	Lbs.	Ozs.	Dms.	Lbs.	Ozs.	Dms.
10	0	1	7	2	1	4	12
10	6	1	7	4	1	3	14
10	0	1	7	4	1	4	12

nglish Wheats.		Kibbled Maize (Maize Grits).		
Ozs.	Dms.	Lbs.	Ozs.	Dms.
13	10	1	11	0
13	14	1	11	8
13	10	1	11	0

ped English Oats.		Whole English Oats.		
Ozs.	Dms.	Lbs.	Ozs.	Dms.
8	2	1	6	0
8	0	1	5	10
8	0	1	5	8

he above are the weights of one quart by asure of the above-named foodstuffs, taken at arate times by three different people.

A Year on a Poultry Farm.

By Lieut.-Colonel **J. MACRORY, D.S.O.**

We will start the year on the first of January—the day when we all make our New Year resolutions to do finer and better things than we have done in the past, and to avoid all the errors and pitfalls into which we have previously tumbled. By the second of January we have usually broken most of our resolutions, so that would *not* be a good day to start the record of this farm on.

On the 1st of January in the Year of Grace 1925, I brushed out the Incubator Room, in which my four Double Gloucesters had been reposing for many months, gradually getting surrounded with a medley of household goods of various kinds. I brushed these goods out, and swept and garnished the room in readiness for action.

New wicks were fitted to the lamps, the oil tanks removed and emptied of any dregs of oil. I may here mention that it is amazing what a quantity of water accumulates in the oil tanks during a season's running—paraffin is no purer than it ought to be, I reckon. This water does not, of course, amalgamate with the oil, but lies in reddish, oily puddles at the bottom of the tank. It does not seem to do any harm, still it is as well to have it out once a year. It would, I think, be a distinct improvement if drain plugs were fitted to the bottom of all incubator tanks which are screwed on to the framework of the incubator.

Two out of the four incubators were now started up. The egg drawers are always a bit stiff to push in after a spell of inaction, and whilst easing these drawers, I noticed that the top of a heavy machine like the Gloucester vibrates a good deal, when even lightly touched, owing to the legs being rather light for the weight they support. I screwed short modern stays from the legs to the bottom edges of the machines, so as to get a triangular fixing, and found that this stiffened the job up splendidly. This is a very simple matter to do, and it seems well worth attending to on any incubator which tends to sway from the legs upwards

I now fixed up my home-made moisture device, consisting of jam-jars full of water with wicks leading therefrom into the interior of the hot-air space above the top sacking diaphragm.

I wish at this point to digress a little, and to give my views on incubators in general. In my opinion there is not a single incubator on the market which can be trusted to hatch every hatchable egg consistently. I have had hatches of nearly 90 per cent. with my Gloucester, and I have also had hatches of 15 per cent. This difference cannot be due to temperature variations, because I have had practically no trouble at all in keeping the temperature absolutely constant throughout the season. Nor is it due to the eggs, which are always most carefully selected, and always hatch well under hens. I am absolutely convinced that it is due to one cause, and one cause only—variations in the moisture supply. I believe the moisture problem is almost, if not quite, as important as the temperature problem. We do not gauge the temperature by guessing at it in our incubators—I think we nearly all use thermometers of moderate accuracy. But ninety-nine out of an hundred of us never think of trying to *measure* the *moisture* present during hatching. Various devices are used for adding or subtracting moisture, but very few instruments for actually measuring the degree of moisture are ever thought of. Personally, I have used Hygrometers (i.e., Wet Bulb Thermometers for measuring moisture) for years in my incubators, but I have never been able to hit on a device which would give me a constant degree of moisture such as I require. The Gloucester people have, however, at last marketed a device which they claim will enable the moisture to be regulated to a nicety, and they also supply a Hygrometer with which to measure it. From the particulars which I have seen, I believe this device is the best thing yet brought out, and I am going to fix it to all my Gloucesters before next using them. It was unfortunately, not on the market in time for me to try it in 1925—and to this I attribute the loss of many hundreds of embryo chickens—and many hundreds of pennies in my pockets.

My own home-made device is a lot better than nothing, but it does not give sufficient moisture. Sprinkling the eggs is also a lot better than nothing, but this gives too much moisture just after the bath, and also lowers the temperature too much for a considerable time, so cannot be considered a really satisfactorily method.

The correct humidity conditions for incubators, according to American practice, are:—

60 per cent. moisture during first week.
50 per cent. moisture during second week
45 per cent. moisture during third week.
40 per cent. moisture at hatching time.

These are the conditions at which I want to aim, but ,as I say, I have never yet managed them.

Now to return to the practise of incubation as carried out on the modern poultry farm.

This farm is so ultra-modern that the Department of Agriculture for Northern Ireland have selected it for one of their demonstration stations. (Loud applause) They grant a small subsidy in exchange for certain conditions. The chief of these are:—

(1) I supply them with accurate statistics showing the profits (if any) made out of poultry.

(2) I allow selected parties of interested visitors to see round the farm.

(3) I give a year's practical poultry training to selected lady pupils who have already done a year's theoretical training in the Government Poultry School.

Having gratefully accepted these conditions ("the times are going hard with me, in fact, the man is 'bruk' "), in due course my selected lady pupil arrived.
She proved, and is proving, a thoroughly satisfact
lady pupil. In fact, she has taught me quite a lot
things—including the proper plucking and trussing
those abominable Leghorn cockerels. (Strictly spe
ing, she has taught this art to my wife, and not
me, but on this subject, which is rather a touchy
more anon I can only hope that I have also tau
her a lot of things, including the art of how
profiteer out of all "poultry things"). But the p
at which I am gradually arriving at is this. Hav
this most excellent lady pupil at my disposal—we
call her Miss White—it occurred to me that I mi
utilise her to do a lot of the donkey work of incu
tion. Say what you like, the hen is a dirty bird,
takes no pride in sending up its eggs in a spotle
clean condition. Say also what you like, I ask
there any real pleasure in scraping and cleaning th
eggshibitions of negligence and squalor? If you
get anyone to do it for you, aren't you seem
pleased? Certainly you are. So am I.

Having got all the eggs nicely cleaned and gra
for me by Government assistance, I determined
the Government should go one step further, and
the eggs by the "Eggometer." This is a very cle
little instrument for testing the specific gravity of e
Its only fault is that it takes time, as all the
have to be immersed in water for the test, and
means that they have all to be dried afterwa
But what of time when the Government pays
piper?

Nothing!

We eggometed.

The results of "eggometing" showed me that e
in the hatching season many eggs that *look* all r
for hatching are really as light as a feather—they
altogether lighter than vanity itself. But the
who eats them, even at 3d. a spoonful, will n
notice that, so that their destination is obvio
determined Other eggs, however, are really g
heavy, solid affairs—regular heavy fathers—and
are the sort to go into the hot chamber.

Later on in the season, I have found that pr
cally every egg that *looks* right, is right; so that
hardly worth getting the Government to use the e
meter at this stage of the proceedings. Why
should be so, I do not know, but I have found
it *is* so.

The eggs, having been tested and dried, are
stored on their sides on trays of bran. I have fo
no advantage in pencilling dates or other hieroglyp
on them, as I use self-turning trays, and pencil m
are usually only necessary to ensure accurate tu
when done by hand. Sometimes, however, I do
the date of collection on the eggs, but I have sel
found it do me any good to know their date.

Having now collected about 450 eggs of high de
we start the top sections of the first two incuba
and hope for the best.

They are left severely alone for thirty hours,
will leave this article alone for at least the
period.

The Marketing of English Eggs.

By W. R. MORRIS HAMMOND.

It is rather difficult to discuss this all-important atter without, in the first instance, saying things hich will not altogether find favour with the oducers. Also, it is rather necessary in the aking of a logical argument to reiterate many ell-known defects that are the basis of the comaints against the English egg.

Fellow producers of guaranteed, clean, **graded,** ew-laid English eggs will find little in this article at is new to them, but I trust they will be able support my ideals. If some think my ideals o high or unattainable, I would refer them to quotation from which I get comfort:—"The ealist of to-day is the practical man of -morrow," and may remark that, although we ay strive a life-time after an ideal that proves self unattainable, it enables us to leave things etter than we found them, and **that is progress.**

Now let us try to get to the root of the trouble. hy are the quotations in the Press for English ggs always some shillings below the best foreign ggs? The real reason is, that—and it is a orrible admission to have to make in an English oultry journal—they cannot be relied upon; either as to size, freshness, nor cleanliness.

Let us take the first difficulty, Size. In my pinion this involves, to a very great extent, the oultry press. At seasons of the year that really o not matter it will be invariably found that the oultry press seriously urge the breeding for larger eggs, without saying **how** it is to be done. But in the spring of the year it will state that eggs that hatch the best are those weighing about 2 oz.; some will be so candid (and they are quite right, mark you!) as to say that an egg weighing 1⅞ oz. will hatch best of all.

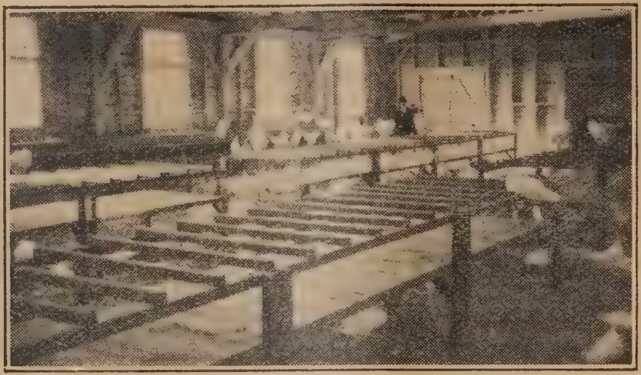
W. R. Morris Hammond's Commercial Egg Farm, Cropredy, Banbury, Oxfordshire.
Large Laying House, 140 ft. x 16 ft., 8 ft. high in front, 6 ft. 6 in. at back, 11 ft. at ridge. Built of Fibro-Cement Sheets. Divided with partitions into eleven sections. Takes 550 White Leghorns. Glass lights back and front. Ridge ventilation in addition to 15 in. open in front under hood. Water bays built into the back of each section. Stands 8 ft. x 4 ft., with 16 trap-nests, dropping boards over, and perches, together with Magazine hoppers each end, in each section. Leaves floor absolutely clear.

W. E. Morris Hammond's Commercial Egg Farm, Cropredy, Banbury, Oxfordshire.
Large Laying House, 60 ft. x 36 ft., 10 ft. to eaves, 15 ft. to centre roof. 48 ft. of box louvre ventilation in centre of roof. See other photographs for internal arrangements. There are two Laying Houses similar to this.

Now I will ask this question: Can any producer persuade his hens that make a habit of laying eggs weighing 2¼ oz. to lay eggs weighing 2 oz. for his incubator? We shall only increase the average size of English eggs by hatching big eggs from hens that constantly lay big eggs. And you will find it will take years of individual selection in breeding and trapnesting to increase the average weight of eggs produced by 1 lb. per 120. Yet, as doubtless you all know, this is the amount by which English eggs have decreased in weight during the last five years.

The second difficulty, Cleanliness, lies entirely with the producer. If it is ensured that adequate nest-boxes are provided, and that the hay in the nests is replenished at least once a week, the small amount of labour required for cleaning will be surprising. That is provided the litter inside the houses is dry and reasonably clean, and that the outside is not a quagmire of mud. By adequate nest-boxes I mean one nest to every three birds where trapnesting is practised, and one nest to every five birds otherwise.

The third difficulty, Freshness, is rather more complicated. Assuming that the producer collects his eggs once or twice a day—in trapnested houses every one and a half hour the day through—there should be no trouble in guaranteeing the freshness *his* end. The trouble arises after the eggs have left the farm. Every producer, where possible (and anything over a case of eggs per week makes it possible), should sell his eggs direct to a retailer. Some will say, How? Well, do as I did, put an advertisement in the daily press, and you will get more enquiries than you are able to fulfill. There are more dairymen and grocers than ever you would think only too anxious to procure a guaranteed egg. Why not give this



W. R. Morris Hammond's Commercial Egg Farm, Cropredy, Banbury, Oxfordshire.

Large Laying House, 60 ft. x 36 ft., 10 ft. to eaves, 15 ft. to centre roof. 48 ft. box ventilation in centre of roof. Takes 500 White Leghorns. The droppings boards, and perches are in two rows down the centre of the house. The trap-nests, with open slatted bottoms, and hoppers over, are down each side of the house.

method a trial? It will mean breaking away from old associations and getting out of a rut. (I know how difficult this is for an Englishman, more especially for a farmer!) It will mean a little trouble in the way of buying egg-boxes and taking the eggs to the station perhaps, but once you have made the break and got the extra remuneration it brings, you will wonder (like everybody else did before you) why you had not done it years ago. And, more than that, it will mean that you are doing your best to place the English egg upon a higher plane. Every producer knows that any higgler or market that his eggs go through means a commission to the people handling them; and these higglers or markets are sure that the commission is profit. Are **you** sure that every egg you sell to them means a profit to you? Even if you are sure (!) business demands that you must sell your produce in the *best* market, and that is to the retailer.

A certain combination of poultry farmers south of the Thames decided to try and get a good name for their eggs by stamping them. London dealers came along and bought them when eggs were cheap, took them back to London and put them into store. And when the winter came, and eggs were dear, trotted out these same eggs all with the guaranteed stamp upon them! This also happened to a co-operative society north of the Thames. I think the moral will bear emphasising: Never sell a stamped egg to any other than a retailer in whom you can put complete trust, or your stamped eggs will soon be classed with the "market" eggs.

Just a few words on my ideal of grading (I shall soon have Mr. Newman telling me he will have to provide elastic covers to "Eggs" if I go on much longer). You are all more or less aware that, in my opinion, all producers in a fair way of business should grade their eggs into four weights, viz., 1¾ oz., 2 oz., 2¼ oz., and 2½ oz. (approximately 13, 15, 17 and 19 lbs. per 120), and that the prices
paid for them should be in proportion to t
weights. That is when 2 oz. eggs are 20/-, 1¾
should be 17/6, 2¼ oz. 22/6, and 2½ oz. 25
That is the way I have sold my eggs for so
years, together with half-a-crown premium on t
top price given in the "Daily Telegraph." T
retailers have found some difficulty in realising t
same profit on the larger eggs as on the smal
ones, because this method of grading is not gen
ally recognised. In fact some consumers think
absurd to pay 2½d. for a 2½ oz. egg when they c
get a 2 oz. egg for 2d.! This involves the edu
tion of the public, which we can do only through t
retailer. If we are going to capture the mar
for large eggs, which Holland and Denmark sh
between them to-day, somebody **must** inaugur
a proper system of grading, and get the grad
eggs on to the market. Who is it to be? In s
gesting our own Society, I do not want it to
thought that I am unwarrantably putting furt
burdens upon the shoulders of Mr. Newman a
his staff, who, we business men know, must ha
a very heavy day now, without us adding any m
to it. But it is evident, as it has been all throu
the life of the S.P.B.A., that we must help o
selves.

In prefacing the following suggestions with
few remarks about egg co-operative societies,
do not wish it to be thought that I am decryi
them, they are necessary to certain classes
producers. If one looks at the yearly avera
prices obtained by these societies it will be fou
that they vary from 1/5 to 2/- per dozen eg
And most of these average prices are worked
very differently from the way I should work th
out. Also, I do not think anyone will deny t
they, at least, cause *some* delay between produ
and consumer, in addition to having to draw
commission. The main complaint against them
I think, that most of them get only the ordin
market price for their eggs. I have a circu

W. R. Morris Hammond's Commercial Egg Farm, Cropredy, Banbury, Oxfordshire.

Large Laying House, 60 ft. x 36 ft. Another internal view
of (2) showing water bays built on to each end. These
water bays are lined out with Fibro-cement sheets, and
have slatted drained floors. Each bay has two troughs,
each holding 10 gallons. The 15 in. fender in front pre
vents any water or dampness getting into the house o
litter.

ore me now from what I believe to be one of : largest egg co-operative societies, and the price oted is *below* the current price in the markets. my opinion this undercutting is a very serious tter. Are not candled and roughly graded eggs rth more than the generality of eggs that get o the markets, which may be anything up to ee months old, and dirty? I thought members it eggs to co-operative societies to get prices ter than those ruling in the markets.

/ery well then, to obtain the *best* prices for our gs, and to encourage the production of large gs, we must help ourselves.

As we are having our general meeting in another l this year, and consequently shall not be so essed for time, I am hoping that the following ggestions may come up for brief discussion.)

s it not possible for a small committee to be med to test the feeling of some producers of t-class eggs regarding the following :—

Members who agree to supply eggs as outlined above (or, some other standard, if considered better) have their farms inspected with the object of ensuring that they can comply with the conditions.

When the committee consider that they can lay their hands upon, say, a million eggs a year, they advertise such eggs together with the price in the daily press.

If sufficient retailers come forward to consume the supply available, a binding contract is drawn up by the committee for operation between the producer and retailer.

Retailers are put into communication with producers best able to meet their requirements.

The committee loan rubber stamps for the producer to imprint his eggs.

Complaints must be made from either side to the committee, the committee's ruling to be binding upon both.

is is only a very rough outline; it is not worth ng into details unless the suggestions obtain ne support. But could we not by this means *lly* provide a guaranteed, clean, graded, new- l English egg?

do so wish I could do or say something to suade members of the urgency of the need for ng something to enhance the prestige of glish eggs. It is no use saying one to another at a serious thing it is, something must be **done.** are importing £18,000,000 worth of eggs ually; reckoning every £1,000 spent in eggs resents £100 paid in direct labour (I know m experience it is nearer £200), we arrive at enormous figure of £1,800,000 paid for foreign our alone. This amount (£1,800,000) would 23,077 farm labourers 30/- per week, **and** re- e the rates and taxes. Selah! This would an real help to the deplorable state of unem- yment.

W. R. Morris Hammond's Commercial Egg Farm, Cropredy, Banbury, Oxfordshire.

Large Laying House, 60 ft. x 36 ft. Another internal view of (3) taken from the other end, so as to show the broody pen in the top left-hand corner. This is merely a 10 ft. space wired in, with perches, water and hoppers, but no nests. From 2 to 4 days in here is generally sufficient to cure broodiness.

I have been harping on proper grading of guaranteed eggs as an aid to marketing for years, if it is any use let us **do** something; let not all our ideas on matters of progress end in talk.

A big firm of retailers in the South of London (and it is one of the fairest firms in the eggs trade I know) have recently issued a new contract in which eggs have to be graded into two weights only, viz., two ounces and over, and not less than 1¾ ounces. The weak point is, of course, that whereas payment for the small eggs will be less than for the standard 2 oz. egg, nothing extra will be paid for the 2¼ oz. and 2½ oz. eggs. (As is well known, birds that lay large eggs do not lay as many as those that lay small eggs.) There is also a penalty up to as much as 5% of the price paid if your March/May quota exceeds by more than three times the October/November average. And if the March/May quota exceeds the October/November average by more than a certain amount, the whole of the June/September output is penalised up to as much as 5% of the price paid. Is it not time the producer, through some such combination as outlined above, endeavoured to state the conditions of sale, instead of the retailer dictating terms of acceptance, in addition to enforcing, what I consider, unreasonable penalties? If you are interested don't let this pass without **doing** something.

Scientific Poultry Breeders' Association.

MIDLAND LAYING TEST.

Mr. A. H. Brain informs me that there is still room in both sections of the Midland Test for a few more entries, and the support of breeders is requested.

Some Fruit-Growing Notes
to help Poultry-Keepers.

By **F. W. WHEELER, F.R.H.S.**

> "Just to be out of doors, so still! So green!
> With unbreathed air, illimitable, clean,
> With soft, sweet-scent of happy growing things,
> The leaves' soft flutter, sound of sudden wings;
> The far-faint hills, the water wide between,
> Breast of the great earth-Mother! Here we lean
> With no conventions hard, to intervene
> Content, with the contentment Nature brings
> Just to be out of doors!"
>
> C. P. GILMAN.

IS THERE ANY LINK with poultry-keeping and the above quotation? I think so, because I am certain that there are a very large number of poultry-keepers who have taken up that life "Just to be out of doors" in their work, and to them must also be added those wanting to grow fruit and flowers: all loving the "soft, clean air" with its "sweet scent of happy-growing things." I do not believe that the majority who deliberately chose this kind of country life thought it was the ideal one for making a fortune. The war called many from the office to be "out of doors," and afterwards they did not want to return to town life, but felt the truth of Emerson's words: "Give me health and a day with Nature, and I will make the Pomp of Emperors ridiculous," or, perhaps, realised what Ruskin so well expresses in the words: "Nature however simply observed, or imperfectly known, is in the degree of affection felt for it, protective and helpful to all that is noblest in humanity."

It is quite probable that the "Dairy Show" number of "Eggs" will be read by many just starting poultry-keeping, and, possibly, by some not new to the life; so to all new readers I should like to offer a few thoughts which I venture to think are worthy of careful consideration. Although—

> "'Tis wise to let the touch of Nature thrill
> Through the full heart: 'tis wise to take your fill
> Of all she brings, and gently to give way
> To what within your soul she seems to say,"

we are, nevertheless, up against the fact that many of us are compelled to seek our living out of "Mother-Earth," and I know many have found that the various country occupations have not brought in all the big "cash" returns that were anticipated.

The hand has been "put to the plough," and the determination to see it through to a success is also with us, but let us take all opportunities that will help. Some with their poultry-keeping are working on the "One Man Poultry-Farming" system, and doing things intensively, others like a wider scope, and to employ a certain amount of labour. To both, but in particular to the latter class of poultry-keepers, I would urge the consideration of also utilising their land to the full by seeking the additional income to be had from the cultivation of fruit trees.

I was reading an article the other day which was written to prove to the general and fruit farmer that, in the words of the Ministry of Agriculture's pamp let: "The value of poultry on the land has bee greatly overlooked, and that eggs and poultry cou be more economically produced by them." I thi the same arguments used to prove their case, reversed, would hold equally good for the economic production of fruit on the poultry farm. In both cas the one can help the other, and should go hand hand for mutual benefits.

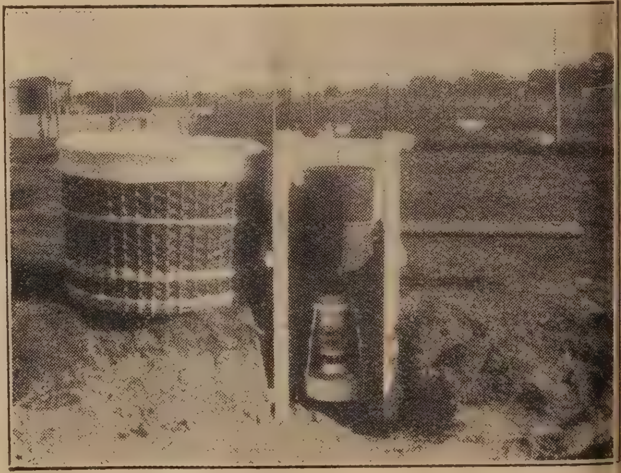
I shall not enlarge on this to-day, or give the ma reasons set forth Some will be found in the sma book that the S.P.B.A. Council have just issue namely "Fruit Growing for the Poultry-Keeper, price one shilling, from The Secretary, S.P.B.A., T Beeches, Rudgwick, Sussex.

Judging from enquiries this should prove useful many, and possibly future articles in "Eggs" w further help readers or those finding an interest in t growing of fruit. The writer is always pleased to de with difficulties that meet beginners, and to advi as far as time and circumstances allow.

In my next article I hope to answer some questio y "CORNWALL," and afterwards to continue t "Autumn Notes"; then enlarge on part winter pru ing notes, with, I hope, some illustrations. I mig close to-day with a question myself. Can a read tell me who wrote the following lines:—

> "The little cares that fretted me,
> I lost them yesterday
> Among the clover-scented grass,
> Among the new-mown hay,
> Among the huskings of the corn
> Where drowsy poppies nod—
> Where ill-thoughts die,
> And good are born.
> Out in the fields with God."

ERRATUM.—October 7th: Page 228 should re Geo. Munro, Ltd, and not "Moor," of Cove Garden, supply "oiled wraps."



A unique Brooder, referred to by Major Hesketh in his recent article in "Eggs," showing circular basket brooder on one side, and the hot-water pipe for diffusing the warmth, inside the brooder, on the other side. One or two brooders may be used on each side with the same oil stove and water pipe, as shown on the picture. Capacity for each brooder is 100 chicks.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

LAYING TESTS.

GOVERNMENT OF NORTHERN IRELAND.

The report of this test, which was completed on 16th September, has just been received. Seventy-two pens of six birds each competed.

In the White Wyandottes' Section Mrs. James Herron won with 1,379 eggs, value £12 11s. 1¼d. Lady Dunleath was a good second, with 1,322 eggs, value £12 4s. 3¾d. Mrs. Porter-Porter again takes a prominent position, being third. In actual number of eggs she has beaten Lady Dunleath, but the value is 4s. less. The fourth position is taken by Mrs. Loughrin, with 1,258 eggs, value £11 9s. 4d.

The largest number of eggs laid was 1,399 by the pen, the property of Mr. S. Steels, but the eggs failed to reach the required average weight of 24 ounces per dozen.

In the White Leghorn Section Mr. J. P. McMurray wins with 1,403 eggs, value £11 18s. 9¼d. Mr. McMurray secures the "Farmers' Gazette" Cup for the best score in all Ireland. Mrs. L. H. Mitchell is a good second, with 1,304 eggs, value only 1d. less, and it is to be noted that there were two broody pullets in this pen. Mrs. Workman, 1,307 eggs, value £11 14s. 1½d., takes the third position, while the fourth is taken by Mr. D. McIntyre, with 1,233 eggs, value £11 4s. 6¾d. It is pleasing to note the steady improvement in the White Leghorns, which in previous tests have hardly been satisfactory.

In Section 3.—Non-sitters other than White Leghorns, Miss Morrison is first with Anconas, 1,115 eggs, value £9 17s. 11d. Mrs. Main second with Black Leghorns, and Mr. D. Phelan third, with the same breed.

In the Heavy Breeds, other than White Wyandottes, in which 12 pens competed, Mrs. Alexander wins well with her pen of Light Sussex, laying 1,152 eggs, value £10 16s. 11¾d. Mrs. Irwin is second with R.I. Reds, laying 1,160 eggs, but, in spite of the 8 additional eggs, there is a considerable difference in values, the value of eggs laid by Mrs. Alexander being £1 4s. 10d. more than that of Mrs. Irwin. Miss Clifford is third, also with R.I. Reds, 1,110 eggs, value £9 3s. 7¾d.

In the pens confined to holders of Egg Stations, Mrs. Bell wins with White Wyandottes. The second place is taken by Mrs. Grey, and third by Mrs. Thomson.

In the Duck Pens, where five ducks were competing, Mr. G. C. Richardson's Khaki-Campbells laid 866 eggs, value £7 10s. 11d. Mrs. Bell, who lost one of her ducks, was second with 772 eggs, but owing to a high mortality among the ducks the test cannot be regarded seriously.

GOVERNMENT OF SOUTHERN IRELAND.

The result of the competition conducted by the Department of Agriculture of the Munster Institute has just been announced. The competition covered a period of 48 weeks from 16th October, 1924, to 15th September, 1925.

Fifty-eight pens of pullets of various breeds competed, and fifteen pens of Indian Runner Ducks. The number of birds in each pen of pullets was six, and in each pen of ducks four.

In the First Section, consisting of Leghorns, Mrs. L'Estrange won handsomely with White Leghorns, 1,369 eggs, value £10 13s. 11d., an average of 228.1/6 eggs per bird. Mrs. Studdard was a good second with the same breed, 230.2/3 eggs per bird, but the value was 10s. less. The third position was taken by Mrs. Cryan, also with White Leghorns, 1,218 eggs, value £9 5s. 9d., while Mr. Dooley was fourth with 1,159 eggs, value £8 9s. 7d.

Section 2, White Wyandottes.—Lady Dunleath won with 1,286 eggs, value £10 7s. 6d., an average of 214.1/6 eggs per bird. Mrs. Walsh was second with 5/6 less value, but her aggregate was higher, 1,362 eggs, or an average of 227 eggs per bird. Mrs. Porter-Porter was third, 1,267 eggs, value £9 16s. 7d., while the fourth place was won by Mrs. L'Estrange with 1,181 eggs, value £9 13s. 7d.

Section 3, Any Other Heavy Breed.—The Langford Lodge Poultry Farm won with R.I. Reds, 1,298 eggs, value £9 16s. 2d. Mrs. Marshall was second with the same breed, 1,148 eggs, value £9 10s. 6d. Mrs. Chearnley was third, with 1,255 eggs, value £9 8s. 2d., and the Mill View Poultry Farm fourth, with 1,065 eggs, value £8 5s. 10d.

In the Duck Section Mrs. Marshall won easily with White Runners, 881 eggs, value £7 2s. 4d., while she also received a Special Prize for the duck laying eggs with the highest market value for her bird, which laid 280 eggs, value £2 5s. 4d. Mrs. Tallant was second, with Fawn and White Runners, 760 eggs, value £6 6s. 10d., and Mrs. Cruit with the same variety, 788 eggs, value £6 1s. 11d.

APPLICANTS FOR MEMBERSHIP.

Henry, Mrs. E., Keaden, Newbridge, Co. Kildare, Ireland.
Hall, L. D., Red House, Chilworth, Romsey, Hants.
Myatt, A., "The Sheilding," Doddington, Nantwich, Cheshire.
Sykes, R. W., 2, Quaker Lane, Ardsley, Barnsley.
Harding, R. A., Railside P.F., Wilton, Wilts.
Mayes, J. W. H., Paddock House, Holbeach, Lincs.
Couzens, C. C., Prairie House, St. Quen's Bay, Jersey, C.I.
Stanway, T. N., Springhill P.F., Camp Road, Canwell, Sutton Coldfield, Birmingham.
Stanway, P. A., Springhill P.F., Camp Road, Canwell, Sutton Coldfield, Birmingham.
Blackwell, Mrs. E. L., Holmbush, Kelly Bray, Cornwall.
Wilson, W., Police Station, East Leake, Loughborough.
Wagstaff Bros., Scholes, Thongsbridge, near Huddersfield.
Bower, T., Park House, Hatherton, Nantwich, Cheshire.
Ball, G. H., 5, Pleasant View, Moston Lane, New Mosten, Manchester.
Hopkinson, Col. H. C. B., Downton House, Kington, Herefordshire.
Rothwell, H., Ribchester Bridge P.F., Ribchester, near Preston.
Dalton, E., 1593, Walker Road, Walker, Newcastle-on-Tyne.
Webber, Capt. F. P. Pierson-, Ettington Manor, Stratford-on-Avon.

McKinnor, J., 7, Brownsfield, Inchinnan, Renfrew, Scotland.
Burns C., Sundorne P.F., Thingwall, Cheshire.
Halsall, R., Melling Road, Aintree, Liverpool
Barrow, L., 18, Sandy Lane, Aintree, Liverpool
The Country Gentlemen's Association, Ltd., Letchworth, Herts.
Deighton, Mrs., Fir Tree, Effingham, Surrey.
Horne, Miss M. S., Dickley Wood, Harrietsham, Kent.
Bontoft, H. W., The Bungalow, Wiltram Road, Woodball Spa, Lincs.
Worboys, W., Merlin, Bedford Street, St. Neots, Hunts.
Stokes, Miss K. L., "Orchard End," Cherry Avenue, St. Thomas' Hill, Canterbury, Kent.
Amy, J., Mont Cantel, St. Helier, Jersey. C.I.
Whitaker, J. F. A., Pickworth, Stamford.
Moore, W. T., St. Martins, Eastwood Road, Rayleigh, Essex.
Green, W. G., 4, Harlech Road, Dewsbury Road, Leeds.
Street, E., 'Bendarrock," West Street, Ottery St. Mary, Devon.
Maitland, Miss C. F., Boreatton Coppice, Baschurch, Shrewsbury.
Hardwick, J. E., Sheldon's Farm, Walgrave, Northamptonshire.
Dobson, J., 4, Harradon Road, Aintree, Liverpool
Hulley, J., 110, Cross Hill, Ecclesfield.
Sharpe, Miss M., Little Langley, Church Way, Sanderstead, Surrey.
Stone C. "Morning Dawn," Eastwood, Southend-on-Sea, Essex.
Lovegrove, Mrs. W., Overton Cottage, Dinton, Wilts.
Saunders, E., "The Fort," Lisnabreeny, Castlereagh, Belfast.
Boardman, A. N., Carr-Farm Cottage, Denholme, Bradford.
Searson, Mrs. N. Moore-, High Barn Hall, Halstead, Essex
Bostock, S. Stewart-, Deane P.F., near Winchester.
Townsend, W., High Ridge P.F., Blackmore, Essex.
Stephenson, W. E., Wakefield Road, Ossett, Yorks.
Greaves, T., Grains Ash P.F., Meltham, near Huddersfield.
Hall, W., Farmstead Bungalow, Westley Hall Drive, Laindon Hills, Essex.
Hatt, Mrs., The Hale, Benson, near Wallingford, Berks.
Fawcett, R., Jackson House Farm, Blacko, Nelson, Lancs.
Parker, E., The Sands, Appleby, Westmoreland.
Liffen, A., "Elmwood" P.F., Hawkinge, Folkestone.
Lacy, Miss, Zoon's Court, Hucclecote, Glos.
Taylor, Harold, 2, York Road, Haxby, York.
Smith, E. J., Warth Farm, White Coppice, near Chorley, Lancs
Furness, Percy, Moor House P.F., Hartshead, Liversedge, Yorks.
Lovell, W. G., Riverside P.F., Hanham, Bristol.
Solomon, Miss D. H., Mansion House, Leadhills, Lanarkshire, N.B.
Jackson, F. J., Oaklea, Waterhouse Lane, Chelmsford, Essex.
Bell, R. J., Chapel Farm, Smallburgh, Norfolk.
Walton, W. E., Hazel Cottage, Halstead, near Sevenoaks, Kent.
Taylor, H. A., 19, Wolseley Road, High Brooms, Tunbridge Wells.
Hill, A. E., Sherfin Edge, Baxenden, Lancs.
Keeshaw, T., 50, Trinity Street, Oldham, Lancs.
Meekins, R. H., 112, Southgate Road, London, N.1.
Corser, Mrs. A., Newlands, Harrietsham, Kent
Mort, E., Highgate Farm, Highgate Lane, Lepton, Huddersfield.
Bussey, A. Owen, Wayford, Stalham, Norfolk.
Heron, E. R., Almscliffe, Menston-in-Wharfedale.
Cant, F. H., "Southview," Bentley, near Ipswich.
White, T., Hawkcombe, Porlock, Somerset.
Traves, W. R., Stickford, Boston, Lincs.
Jowett, John, 8, Vine Terrace, Thornton, Bradford
Dimmock, F. J., 4, Broom Terrace, Park Lane, Keighley.
Waterhouse, A., Prospect House, Braithwaite, Keighley.
Macaulay, Mrs. C., 3, Moorlands Terrace, Thwaites Brow, Keighley.

MARKET REPORT—Continued.

Second, 2s 9d. Skipton: First, 2s 8d. Truro: First, 2s 3d. Welshpool: First, 2s 6d; Second, 2s 4d. *Carlisle: First, 2s 10d. *Derby: First, 3s 0d. *Ipswich: First, 2s 9d; Second, 2s 3d. *Lincoln: First, 2s 6d. *Shrewsbury: First, 3s 0d; Second, 2s 9d. *York: First, 2s 11d; Second, 2s 10d.

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 9d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 6d; Second, 1s 3d. Newport (Mon.): First, 1s 6d; Second, 1s 2d. Truro: First, 1s 4d. Welshpool: First, 1s 0d; Second, 10d. *Derby: First, †5s 0d; Second, †3s 6d. *Ipswich: First, 1s 6d. *Lincoln: First, †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 5d; Second, 1s 2d. *York: First, †5s 0d; Second, †4s 0d.

DUCKS.

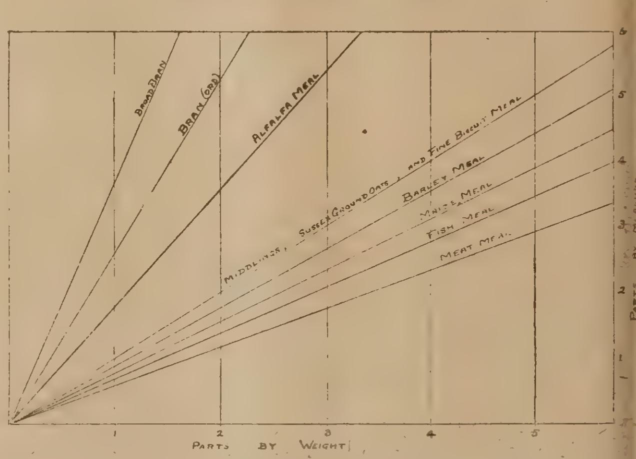
Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: †5s 0d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 6d; Second, 1s 4d. Welshpool: First, 1s 0d; Second, 10d. *Derby: First, †4s 6d, Second, †3s 6d. *Ipswich: First, 1s 4d. *York: First, †6s 0d; Second, †5s. 6d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

ANSWERS TO QUERIES—Continued.

K. T. (Co. Antrim) sends a sample of fish meal at 21s. 6d. per cwt. At first appearance this seemed to be a highly satisfactory sample, but in the course of investigation it appeared to be heavily adulterated with shudes, which would account for the almost total absence of smell. The maize at 10s. 3d. per cwt, is a good sample. Pollard at 9s. 9d. is rather coarse, but is good value; Sharps at 10s. 3d. are hardly such good value; "Russ' meal is a by-product from the manufacture of corn flour. The analysis is good, and it should have approximately the same value as maize germ meal. It is excellent value at 10s. 6d. per cwt. The meat and bone meal at 15s. 6d. cwt. contains too much bone. Bran at 9s. 6d cwt. is a good sample and good value. Barley meal a good average sample. Ground oats: It is ridiculous to sell these as "Sussex" ground. They are a fairly good sample at 13s., but are in no sense "Sussex ground." The "Rus" meal could be used in place of maize meal in a poultry mash. My correspondent has six hens and a cockerel from a specially chosen pen of Mr. Boucher's. He is proposing to breed with these next season, and keep the best of the pullets to breed from when they are a year old. It is too early to advise him yet as to methods of breeding. He will have to form groups where there is not too close relationship. His suggestion that he should breed next season with his present cockerel, and keep one of the best hens for cockerels to mate with this season's progeny, I do not like. It is a bad principle to start breeding for egg production by beginning in-breeding.

CONVERSION CHART.



For this Chart we are indebted to Mr. Gerald Fox.

Explanation:—For direct conversion, it converts pounds to quarts, and is very approximate to the Table of Weights and Measures published in this issue.

For Provisional conversion in mixing mashes, etc., it converts pounds to buckets, sacks, pans, or any other measure.

Market Report.

NISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, OCTOBER 16th, 1925.

RAIN AND FEEDING STUFFS.—Home-grown wheat is in
r demand and dearer at Hull and London, but at Liverpool
is slow and prices lower on the week. Milling samples now
age about 10s. 5d. per cwt. as compared with 10s. 3d. a week
British malting barley generally meets a dull demand at
t recent prices, but at London values are easier, especially
ower grade samples which comprise the bulk of the supplies
ffer. Feeding barley is in amply supply and unchanged in
, except at London, where quotations have declined 6d. per
on the week. Home-grown oats mostly sell at late rates,
at Bristol prices record a reduction of 6d. per cwt., larger
lies being available.

mported wheat is irregular, but prices mostly show little
ation on the week. Foreign feeding barley meets a dull
e and values are lower at several centres, but oats, which
rather scarce, are in fair demand and slightly dearer. Maize
quiet request and cheaper at all markets, Argentine aver-
g 8s. 8d. per cwt. as against 8s. 11d. last week.

Bran is in fair request at late rates, and coarse middlings
ly sell at recent prices, but at London values have declined
er ton. Barley meal, although in fair demand, is cheaper,
maize products also realise less money. Oil cakes meet a
t trade and several reductions in price are recorded.

ILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull,
7s; Liverpool, £7 5s; London, £6 15s. Broad Bran: Bristol,
7s; Hull, £8 7s; London, £8 5s. Middlings—Fine (Imported):
ion, £9 5s; Coarse (British): Bristol, £9 7s; Hull, £9 5s; Liver-
, £9; London, £8 2s. Pollards (Imported): Bristol, £7 10s;
, £6 17s; London, £7. Rice Bran: Bristol, £7 15s; Liverpool,
s. MEAL.—Barley Meal: Bristol, £9 15s; Hull, £10; London,
2s. Maize Meal: Bristol, £10 15s; Hull, £9 10s; Liverpool, £10;
lon, £10 10s. Maize Meal (S. African): Bristol, £9 15s; Hull,
10s; Liverpool, £9 5s; London, £9 5s. Maize Germ Meal:
tol, £11 15s; Hull, £10; London, £9 10s. Maize Gluten Feed:
tol, £11 12s; London, £9 15s.

EGGS AND DEAD POULTRY.

ight marketings of eggs sell at fully last week's rates, while
l poultry meets a quiet but steady demand at unchanged
es.

Week-end Prices—Eggs (per 120): British, 24s 9d, 18s 9d; Irish,
9d, 23s 6d; Danish, 23s 9d, 22s 9d; Dutch, 24s 6d, 23s 3d;
adian, 20s 0d. Belgian, 22s 3d, 21s 3d; Italian, 20s 3d, 19s 3d;
entine, 18s 0d, 16s 6d; Lithuanian, 17s 0d, 16s 0d; Polish, 13s 6d,
d; Chirese, 14s 6d, 13s 6d; Russian, 16s 0d, 14s 9d; Esthonian,
0d, 15s 6d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 8d, 1s 4d; Irish,
d, 11d; Others, 1s 4d, 1s 0d. Ducks, 1s 2d, 1s 0d. Geese, 1s 1d,

EGGS.

Per Doz.—Ashford: First, 2s 11d: Second, 2s 9d. Birmingham:
t, 2s 8½d; Second, 2s 6d. Bridgwater: First, 3s 1½d; Second,
0½d. Chelmsford: First, 2s 11½d; Second, 2s 7¾d. Colchester:
t, 3s 0d; Second, 2s 8½d. Doncaster: First, 2s 10d; Second,
d. Dorchester: First, 2s 10d½; Second, 2s. 9d. Exeter: First,
d. Hereford: First, 2s 6d. King's Lynn: First, 2s 8d; Second,
d. Llandilo: First, 2s 9d. Mold: First, 3s 0d; Second, 2s 11d.
port (Mon.): First, 2s 9d; Second, 2s 6d. Norwich: First,
d. Oswestry: First, 2s 11d. Penzance: First, 2s 3d; Second,
d. Saffron Walden: First, 3s 0d; Second, 2s 6½d. St. Ives
nts): First, 2s 9d; Second, 2s 7d. Salisbury: First, 2s 10½d;

(Continued at Foot of Column Previous Page).

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, October 21st, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.

We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

Classified Advertisements.

(PREPAID RATES.)

1d. per word—minimum charge, 1s. 0d.; 13 insertions at price of 12. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS, per line, extra 9d.

DAY-OLD CHICKS, „ „ 1s.

DAY-OLD CHICKS „ „ 1/6

The number of letters, punctuations and spaces between words should be totalled, when the following table will be of assistance:—

9d. size allows for Thirty-one to one line.
1/- size allows for Twenty-seven to one line.
1/6 size allows for Twenty-one to one line.

When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

N.B.—Advertisements, unless accompanied by correct amount, will not be inserted.

Advertisements must be distinctly marked with the Heading under which they are to appear.

Advertisements must be written on a separate sheet of paper, and one side of the paper only.

Name and Address to be counted. In the case of a Box Number being used, the words, "Box," "Eggs," 94, Farncombe Street, London, S.E.16, to be counted as eight words, i.e., making a total extra charge of 1s. 8d. (1s. for Box; 8d. for address) per insertion.

Advertisements must reach this office

FIRST POST FRIDAYS

for insertion in the following Wednesday's issue. Those received after this time will be inserted in the next issue.

PLEASE WRITE CLEARLY, and TO AVOID MISPRINTING OF STRAINS, NAMES AND ADDRESSES, THESE SHOULD BE WRITTEN IN PRINTED CHARACTERS.

Displayed Advertisements.

Ordinary Page; £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 9d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Positions by arrangement. Discounts for Series. Full Scale of Advertising Rates on application.

Advertisements, addressed to Mr. S. H. **BURLES, "EGGS," 94, FARNCOMBE STREET, LONDON, S.E.16, MUST REACH US BY FIRST POST FRIDAY MORNINGS.** for insertion in following issue. Those received later will be inserted in the next issue.

A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to **The Beeches, Rudgwick, Sussex.**

EGGS.

FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C., Longwick P.F., Princes Risborough, Bucks. R.I Reds, Eggs, Chicks, and Stock Birds. List free. Satisfaction insisted on. (See under Ducks and Drakes also).

Eggs determine feeding costs

IT'S not the cost of feed that counts, it's the cost of producing eggs.

Ful-O-Pep Mash makes fowls lay better eggs and for a much longer laying period. At the same time it increases stamina and constitutional vigour. That is why Ful-O-Pep eggs are so economically produced.

Ful-O-Pep-raised birds are "full of pep." See their wonderful health and vigour—look at their glossy and well-grown plumage. A feed that will grow good feathers always produces best conditioned birds—the kind that lay best and longest.

Ful-O-Pep Mash is made from eleven different ingredients and contains just the right amount of amino acids and minerals scientifically blended.

FUL-O-PEP TRADE MARK **LAYING MASH** 7

NO MIXING: NO HEATING WATER: NO TROUBLE

The Ful-O-Pep Handy Monthly Guide tells you all about correct feeding. Save time and money by sending a postcard for a copy to-day. This book has detailed suggestions for every month in the year. It also contains 12 monthly egg charts for you to record your eggs. Free and postage paid.

Ful-O-Pep Poultry Feeds are made and guaranteed by QUAKER OATS Ltd., 11, Finsbury Sq., London, E.C.2.

EGGS.

FOR SALE.

Eggs for Early Spring Chickens livery in October and November: Sussex, Sussex x Wyandotte, Wya R.I.R. 7s doz.; 50s., 100. Chicks double above prices.—Wilkinson, lands P.F., Heysham.

EGGS FOR SPRING CHICK

Dr. Harbord (winner, 1st Bath an Table Fowl) is now booking orders livery October onwards; £3 per 100; for 15. No replacements. From his Light Sussex and R.I.R. Pens; not stamina, size and quality.—Detling stone.

FOR SPRING CHICKENS

Light Sussex and Light Sussex- Cross. Now booking orders for No delivery: 7s. 6d. dozen.—Major an Everett, Castelmer, Kingston, Lewes

55/- PER 100.

Limited number Light Sussex Eg early Table Cockerels; 200 typical mated to produce "bone." Book ea avoid disappointment.—Holt, Hadlow Sussex.

EGGS AND CHICKS.

FOR SALE.

Table Poultry. Now booking ord Eggs, from Special Table Crosses for Chickens; 7s. 6d. dozen, £3, 100; un replaced.—Simmins, M.S.P.B.A., Hea Sussex.

EGGS FOR SPRING CHICKE

2oz. Eggs from big-framed Light 45s., 100 — Major Disney-Roebuck, Meavy P.F., Yelverton.

SPRING CHICKS!
SPRING CHICKS!

Thousands of Fertile Eggs availabl large-framed Light Sussex; 50s., 100; 500; £21 5s., 1,000. Assorted Sussex Red, Buff Orp., White Wyandotte, Barred Rock eggs; 45s., 100; £10, 50 15s., 1,000. Unfertiles not replaced; cent. fertility guaranteed. Order n fore the rush. Eggs ready now, be despatched on dates specified if in time. Day-Old Chicks available January. May we quote you for yo quirements? We have a flock of 5,000 hardy, healthy birds. Send for trated Catalogue, free.

EASTMAN BROS.,
SUFFOLK POULTRY FARM,
HADLEIGH.

PULLETS.

FOR SALE.

We continue to receive repeat orde Pullets. Further enquiries invited.— and Bacon, Arle Poultry Farm, Ch ham.

Barnevelders. Pullets, Cockerels, ing Pens for sale; closely related winners of 42 prizes, numerous specials this season (mostly utility cl —Mrs. Manwaring, "Plovers," Horsmo Kent.

Pedigree Pullets, Cockerels, Bre Pens; prices moderate; many wins season; both utility and exhibition. C. Beck, Great Amwell, Ware, Herts.

Barnevelders, early April hatched; strain. Pullets, 12s. 6d.; Cockerels each —Miss Everett, Chinthurst, Sha Surrey.

EGGS

THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

;istered at the G.P.O. as a Newspaper.
. XII. No. 18. Copyright.

Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months " 6/4
Three Months " 3/3

Use 'HEBDITCH' Appliances

AND MAKE THE COMING SEASON THE BEST YOU HAVE EVER HAD.

THE

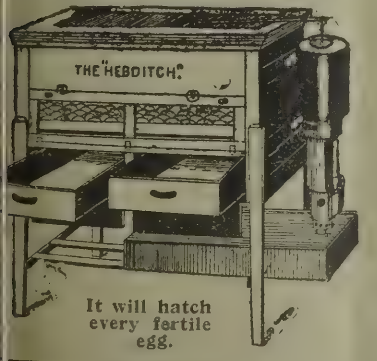
HEBDITCH" Incubator.

used on the Royal Farm of His
yal Highness the Prince of Wales.

NT ON FREE TRIAL FOR SIXTY YS, AND MONEY BACK—EVERY NNY—IF YOU ARE NOT SATISED. With it is an inside electric ht, a large tank lamp, a moisture y, and a reliable thermometer, all at no extra charge.

Eggs.	PRICES.	£ s. d.
40	... ...	5 15 0
70	... ...	6 15 0
100	... ...	7 15 0
160	... ...	8 10 0
260	... ...	11 10 0
390	... ...	15 0 0

tes Free. It is sent promptly and arriage paid England and Wales.


THE "HEBDITCH."
It will hatch every fertile egg.

RRY HEBDITCH, Ltd.

THE

"LORNA DOONE"

Foster Mother.

WILL REAR EVERY CHICK.

No. 1, for 70 chicks, is 4ft. long, 2ft. wide.

No. 2, for 100 chicks, is 6½ft. long, 3ft. wide.

No. 1 costs £3 18 0

No. 2 costs £5 12 6

Carriage paid in England and Wales.

The roof is covered with Bitumen felt, and the whole machine painted two coats good oil paint.

There are Many Thousands in Use, and Sales Increasing.

Send for the Free Catalogue of Poultry Keepers' Requisites.

THE

"FEARNOUGHT"

Poultry House.

An Excellent House for Chickens of any age.

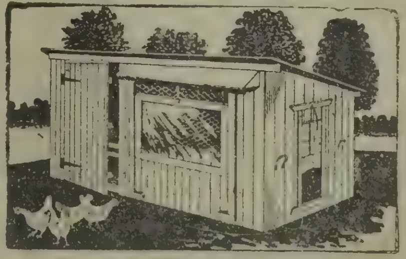
A Glass Shutter adds to its usefulness.

It is made of ¾in. Red Deal Boards and the Shutter is of glass. The boards are planed, V-jointed, tongued and grooved. Door hung with stout hinges and fitted with good presslock. Behind the window is 1in. mesh wire netting. Shutter suspended on strong chain. Two substantial perches, cleats round attendant's door, four strong handles for lifting. Made in sections and sent out with screws for erecting.

Size—6ft. long, 4ft. wide, 4ft. high.

PRICE	£2 11 6	Six for	£14 15 6
Three for	£7 10 0	12 for	£29 6 0

Floors, 13/- each extra. Carriage paid England & Wales. Quick despatch. Immersed in Preserolium (pickled) for 1/- in the £ extra.



DESK J,
MARTOCK, SOMERSET.

PRIEST and SHAW

UNDER ROYAL PATRONAGE
Wyandottes + I.O.W + Leghorns
ALWAYS WINTER EGGS

PULLETS.
NOW is the Time to Buy for Winter Egg Production.

COCKERELS.
First Selection Now Ready for Despatching.

WRITE FOR OUR PRICE LIST.

SANDOWN, - - I.O.W.

SECURE
BLOOD-TESTED STOCK
NOW!
FROM
John H. Dowden & Son.

We have a number of individually recorded hens in our five varieties,

W.L., W.W., R.I.R., L.S., and B.L.,

also a few stock cockerels, bred from individually recorded and progeny-tested hens. Write for our illustrated catalogue without delay, and secure the pick of these birds NOW.

JOHN H. DOWDEN & SON,
"Heydown," Heathfield, Sussex.

The 'Eclipse' Poultry Houses

WITHOUT THE SLIGHTEST DOUBT THE VERY BEST HOUSES EVER MADE.

MAINTAINING THE STOCK IN TIP-TOP CONDITION AND CONSEQUENTLY ENSURING HIGHEST PRODUCTIVITY.

No. II. 60 ft. x 12 ft. (six section), supplied to Mr. J. H. McInnes Skinner, Bramerton Grange, Norwich, who, when placing further orders, writes:—

"I have several customers coming this week to see your house, and hope I may be able to get you some orders. I should like to assure you how highly I appreciate the excellence of your house and granary. I do not believe that the former can be beaten either in design, workmanship, or construction. The house is beautifully airy and perfectly ventilated, and embodies every feature that goes to make the perfect poultry house. There is nothing shoddy or second-class in it. The granary is splendidly built, thoroughly strong and substantial. I heartily congratulate you on them both."

Full particulars from the maker—

HERBERT W. MARTIN, Perivale Poultry Farm & Appliance Works
EAST HARLING, ATTLEBOROUGH, NORFOLK.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, OCTOBER 28th, 1925.

Editorial.

THE PRODUCER AND THE SALESMAN.

The way of the producer is hard as is exemplified by he following correspondence which we publish in the nterest of the parties concerned, and in that of our eaders and members of tho S P.B.A.

We do not propose to comment on the matter, xcept to remark that we cannot understand what Messrs. Symons Bros. mean in reply to Mr. Holdsworth:—"We ordered nothing from you."

The following advertisement culled from the 'Poultry World'' is theirs, and what is such an adverisement but an invitation to send birds?:—

We are Paying Highest Prices for Dead and Live Poultry, ood Old Fat Hens, Ducks, Geese, Turkeys, Table Chickens, and ew-Laid Eggs. Cash and Empties Daily. Bankers: Barclays, Ltd. ighest Trade References Furnished. Telephone: East 3198. stablished over 50 years. Correspondence Invited.—
Symons Bros, Ltd., 251, Roman Road Market, Bow, London, E.3, nd at 827, Romford Road, Manor Park, E 12

Secondly, it is to be noted that they do not dispute eights, and surely even old hens weighing nearly 3¾lbs re worth more than 1s. each, while cockerels weighing ½lbs. are worth more than 4d. a lb., even in a glutted arket. It will be noted, too, that Mr. Holdsworth ad written Messrs. Symons stating approximate numer and weight of birds, and in their reply, dated 22nd eptember, they are ready to accept the consignment.

Thirdly, Mr. Holdsworth made no claim for *best* lass stuff.

The fact is admitted that half the cockerels were eghorns, but there was an equal number of Light ussex weighing up to 5lbs. each, and the hens were ussex and Leghorns The average weight shows the irds could not have been very small:—

etter from Mr. Holdsworth to the Editor of "Eggs,"
October 8th, 1925:

"Dear Sir,—I am writing for you advice as to what ou would do in the following case:—

Being no demand here for table poultry I wrote to essrs. Symons Bros., of London, and in reply they aid that they would take any quantity and guarantee pay the best market prices. So on 1st October I ent two crates, one of hens averaging 3¾lbs each, ne of cockerels averaging just under 4lbs. each, and ter paying 19s. 5d. for carriage, and having to write d ask for payment, I receive a cheque paying me 1s. r head, less 2s. for returning empties, which, after educting carriage, leaves me 1½d. per lb.

I think this is far too little for these, and I would ggest that a note be put in 'Eggs' so that other embers may understand.

The cockerels were (fully half) Light Sussex weighing up to 5lbs. each, and in good condition; others were White Leghorns and White Wyandottes, none of which were below 2½lbs. The hens were also Sussex and Leghorns

Please let me know what to do in the matter.

Yours faithfully,
(Signed) J. A. HOLDSWORTH."

Letter from Editor of "Eggs" to Mr. Holdsworth, 10/10/25:—

"Dear Sir,—You have not sent me the address of Messrs. Symons, and I do not know the firm. Your best plan will be to write them and demand an explanation of these prices.

Am I correct in saying that you have only really received 1½d. per lb?

If they do not send you a satisfactory reply, send me the fullest possible particulars, and their address, and I will endeavour to get a reply from them

Yours faithfully,
(Signed) TOM NEWMAN."

Letter from Messrs. Symons Bros, Ltd., to Mr. Holdsworth, accepting his consignments, 22nd September, 1925:—

"Dear Sir,—In reply to yours, for which we thank you, we are willing to accept all your consignments, and will pay the best market prices obtainable. Terms: Cash, empties per return. We refer you to the 'Poultry World,' and also offer bankers and market references. If right stuff is sent, best prices can be realised. It is difficult to be able to give you fixed price for poultry without first seeing what you have to offer, but you may rely upon a fair deal, and we will guarantee you satisfaction. Regret have no crates to send you, all ours being in use, but will take all care of your own, and return promptly. Kindly advise when sending. We hope to do good business for you in the near future. Labels enclosed.

Thanking you in anticipation of your prompt reply.

We are, yours truly,
SYMONS BROS., LTD.
(Signed) J. W. WILSON, *Secretary.*"

Account received by Mr. Holdsworth from Symons Bros., 5th October, 1925:—

Sold for Mr. Holdsworth, by Symons Bros.:

	£	s.	d.
45 Chickens at 1s each	2	5	0
Less returns	0	2	0
	£2	3	0

Dear Sir,—Herewith cheque in settlement of above. These birds were too small to do anything with.

Markets glutted with this kind of poultry. Can you send good old fat heavy hens, 5lbs. up, and table chickens, 3lbs. up dead weight, plucked only? Tip-top prices can be realised for these. Good demand for eggs.

Thanking you in anticipation.

We are, yours truly,

SYMONS BROS.

(Signed) J. W. W.

Mr Holdsworth's Claim.

To Messrs. Symons Bros., London. October 6th, 1925.

J. A. Holdsworth and Son.

	£	s.	d.
October 1st---To 24 Cockerels, 81lbs at 1s. per lb.	4	1	0
To 21 Old Hens. 79lbs., at 6d. per lb.	1	19	6
	6	0	6
By contra	2	3	0
	£3	17	6

Nett Cash seven days.

Liability denied.

SYMONS BROS., LTD.

(Signed) J. W. W.

Letter from Messrs. Symons Bros. in reply to Mr. Holdsworth's Protest 9th October, 1925.

"Dear Sir.—Yours of October 6th duly to hand, with thanks. In reply we would point out that we did not state that we would pay carriage on returned empties. Further, we dispute your prices *re* fowls as per note received from you. We ordered nothing from you, and no price was mentioned. These birds were sent on consignment, and were very far from being a satisfactory lot. If you will send us the right stuff we can realise tip-top prices, but not otherwise. We have sent you the price these birds fetched, and shall most certainly not pay any more. You may take what steps you please, of course, but whatever you do we are in a position to prove our statements, and we know well how to protect our own interests. We are sorry if you are disappointed, but we are helpless if senders do not send the right stuff.

We hope to hear again from you in the near future.

Thanking you, we are, yours truly,

SYMONS BROS., LTD.

(Signed) J. W. WILSON, *Secretary.*"

Letter from Mr. Holdsworth to the Editor of "Eggs," 12th October, 1925:—

"Dear Sir,—Your letter to hand, for which I thank you, and I am enclosing letters received from Messrs. Symons Bros., of London.

I wrote them giving approximate numbers and weights, and in reply I had enclosed letter, so I despatched two crates to them—one with 24 cockerels in it, gross weight 108lbs., nett 81lbs., which shows an average of 3.37lbs. each, and one crate with 21 hens, gross 105lbs., and nett 79lbs., an average of 3.76lbs. each, for which I am credited with 1s. per head, less 2s. for return carriage on empties, so that after paying 19s. 5d. for carriage to London and 2s. for empties, leaves me with £1 3s. 7d. for 45 birds, and an average of 1.76d. per lb., which I do not consider near enough.

I may state that after I had sent birds I did not hear from them for over a week, and so wrote to ask the cause of the delay, and in reply I received enclosed, with cheque, for £2 3s. Being far from satisfied I wrote again for an explanation, and also enclosed an account for what I thought a fair price, but had same returned with their reply.

The crates arrived back last Saturday, and were sc broken that they will not carry birds again.

I trust that I have stated everything clearly, but if not, will give you any further particulars you may require.

Yours faithfully,

(Signed) J. A. HOLDSWORTH."

Letter from Editor of "Eggs" to Messrs. Symons Bros., Ltd., 13th October, 1925.

"Dear Sirs,—We have received a complaint from Mr. J. A. Holdsworth, of Braeside, Pettycur Road Kinghorn, Fifeshire, in reference to two crates o fowls sent you on 1st October.

In the first crate were 24 cockerels, gross weigh 108lbs., nett 81lbs., showing an average weight o 3.37lbs. each.

In the second crate were 21 hens, gross weigh 105lbs., nett weight 79lbs., an average of 3.76lbs. each

For these 45 birds you sent him a cheque for 1s each, less returns 2s., net amount £2 3s. 0d.

We know nothing but these facts. but in your correspondence with Mr. Holdsworth you merely stat that they were very far from being a satisfactory lot Perhaps you will be good enough to let us have a explanation.

The average weight of the cockerels being 3.37lbs each, we think you will agree that one shilling pe head is a very small price to receive, and even ol hens with an average weight of 3.76lbs. are surel worth more than one shilling each?

Before, however, taking any further steps, we shoul like to have an explanation from you. We are onl stating facts now, as received from Mr. Holdsworth.

Yours faithfully,

(Signed) TOM NEWMAN,

Secretary of the S.P.B.A., Editor of 'Eggs.'"

Letter from Messrs. Symons Bros., Ltd., to Editor c "Eggs," 14th October, 1925:—

"Dear Sir,—Your TN/DMR to hand, with thanks and contents noted. In reply, we wish to state we d not wish to dispute the weight of birds consigned t us by Mr. Holdsworth. What concerns us is the clas of poultry that we received. We did not order poultr from Mr Holdsworth, no price was mentioned, bu poultry was sent to realise best prices obtainable. Ha the poultry sent been the right stuff, far differen results would have been obtained. We can assure yo that country senders have a knack of inducing Londo buyers to accept their wasters. and then putting i a claim for best class stuff. We have repeatedly poin ted out to senders not to send their throw-outs t us. We do not like to refuse delivery, but in our ow iterests must do so, if stuff sent is not good saleable oultry. This will, of course, run the senders into ouble carriage.

Mr. Holdsworth must be aware that his poultry that e sent us was poor. London markets are glutted with his kind, and are practically unsaleable. We do not rish to do anything but what is fair, and we returned Ir. Holdsworth exactly what these birds realised, and re paid cartage and labour ourselves, as we were oping to receive further and better class lots from his sender, when we would have tried to make up for is disappointment.

We regret it is not in our power to send Mr. Holdsworth anything further.

Thanking you, expressing regret you should have een troubled.

We are, yours truly.
SYMONS BROS., LTD.
(Signed) J. W. WILSON, *Secretary.*"

etter from the Editor of "Eggs" to Messrs. Symons Bros , Ltd., 15th October, 1925:—

" Dear Sirs.—We thank you for your reply to our tter in reference to above.

We note what you have to say in reference to the uality of the goods you received from Mr. Holdsworth, nd further that you did not order poultry from him, so that you do not dispute the weights, and your marks as to country senders.

Under these circumstances, we think it would be to ie advantage of all parties concerned if we published ie whole of the correspondence in our journal, Eggs," which we propose to do in the issue of 28th ctober. This, we feel, will save both you and our embers and readers a considerable amount of trouble nd disappointment.

Yours faithfully,
(Signed) TOM NEWMAN,
Secretary, S.P.B.A., Editor of 'Eggs.' "

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression at they must necessarily be scientists, pedigree eeders, or farmers on a large scale to render emselves eligible for membership of the S.P.B.A. his idea is quite incorrect. The S.P.B.A. is out assist all grades of poultry-keepers, from the oprietor of the 10,000-hen farm to the intensivist ith his dozen or so birds; all are entitled to equal nefits. The Five Shilling subscription brings ith it many advantages, namely : Free Advice by ost, a Copy of the Annual Register, the Benefits the Discount System, and many other vantages too numerous to mention here. You ould write for full particulars to the Secretary,)M NEWMAN, The Beeches, Rudgwick, rsham, Sussex. The financial year began on t September.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

"THE PLANNING OF POULTRY HOUSES."

This little booklet, which has just been issued by the Ministry of Agriculture, will be heartily appreciated by poultry-keepers, whether backyarders or those who count their stock by the hundred. I cannot speak too highly of it. To my mind it is the best publication which has yet been issued by a Government department for the poultry industry. Perhaps if I mention the contents, it will be the best way to indicate its value. In the introductory matter, Situation, Floor Area and Perching Capacity, Ventilation and Light, Internal Fittings, Materials, Floors, Roofing Felt, Water, and Runs, are all dealt with, clearly and concisely. Then follow seven excellent plans of the following houses, with specifications and quantities of materials required :—

14 ft. Laying House (two-thirds span roof) ; Lean-to Laying House ; Lancashire Cabin ; House for 25 birds (or double breeding pen) ; Sussex Night Ark ; House for six to nine birds; Philo Coop.

I feel that it is unnecessary to say anything further, except, if I may venture to do so, to warmly congratulate all concerned in the production of a booklet which will be of immense service to poultry-keepers. The price is one shilling, post free, and it can be obtained on application to the Ministry of Agriculture, 10, Whitehall Place, S.W.1. There is nothing better on the subject of poultry houses and their construction published.

AN INTERESTING LETTER.

I have an interesting letter from Mr. H. S. Barnes, writing from Boskop, S.A., commenting on certain items which have appeared in these columns. You will remember that we had some little correspondence on altitude and incubation, it being suggested that delayed hatches were due to the higher altitude. Several readers wrote to support the theory, but I think it was definitely proved that it was a wrong one. Any lingering doubts that remain are dissipated by the experience of Mr. Barnes, who is farming on the high veld, 4,500 ft. above sea level. He finds that the chicks always hatch on the 21st day, if the temperature is correct. He has followed my advice and has not cooled his eggs, and is feeding on the lines advised in these columns, and has had a very successful season, although somewhat troubled by toe-picking. His experience goes to prove the advisability of giving pullets just starting to lay all the crushed maize they will eat for the afternoon feed. This tends to prevent the partial moult. Although temperature varies from 20 degrees of frost during winter to 95 in the shade in summer, he has never found any ill-effect from using maize. Wheat is too expensive and oats too poor to feed. All his eggs are sent to the Transvaal Co-operative Egg Circle, and are sold by weight.

SEX AGAIN.

A correspondent writing from Milan thinks I may be interested in an experiment she is making. She has seven chicks of her own breeding; the eggs were put under a hen three months ago, but she was careful to put only smooth-shelled eggs under her with no mark whatever. My correspondent had read in an old cookery book that if only smooth-shelled eggs were put under a hen there would be no cockerels, which would increase the egg basket enormously. If the writer expects to find seven pullets on her return home, I am afraid she will be grievously disappointed. Of course, by some wonderful coincidence, she may do so, just as the publican won his bet over St. Swithin's Day, and we all dread a wet St. Swithin's as a consequence. The shell of the egg can in no way affect the sex of the chick, neither can the sex of the chick affect the shell of the egg. Nevertheless, if by any chance the birds hatched from those eggs turn out all pullets, where shall I hide my diminished head. I wonder if my correspondent had read this little story in a **new** cookery book instead of an **old** one, whether she would have had any faith in it or not.

BREEDING FROM PULLETS.

I have received the following interesting letter from Mr. A. F. Tomey. While breeding from pullets is generally condemned it has been accepted for some time that matured pullets in their prime make the very best of breeders.

Mr. Tomey should not lose sight of the fact that he has breed from selected pullets.

The danger lies when breeding from immature pullets, more particularly those precocious birds which never attain full development, and from pullets which have laid very heavily.

In my view, an early-April Leghorn pullet is a better breeder in February than she is two months later, when she is exhausted by heavy egg production. I do not believe that mating with a second-season male has any advantage. You cannot compensate for immaturity on the female side by mating to an old male. However, Mr. Tomey's letter is of great interest:—

"Dear Sir,—The subject of Pullet Breeding aroused my curiosity owing to the number of people who condemned the practice. Lecturers and writers developed a habit of condemning pullet breeding probably because they felt on safe ground. That is was a habit I proved by writing to a number of them, asking for their authority. The replies I received were disappointing and gave me no assistance, so I decided to investigate the matter myself.

To begin the experiment I was in doubt as to whether I should mate a cockerel with pullets, or use a two-year-old male. To help in the solution of this point I ran together in a field male and female birds of ages ranging from eight months to three years. Nature has evidently provided birds with the instinct for proper selection for breeding, for I noticed that the three-year-old male birds passed over the two and three year females in favour of the pullets, and in a like manner the cockerels preferred the more mature hens. I therefore selected a vigorous three-year male and mated him to three pullets with good records and laying large-sized eggs.

These pullets had been hatched in the first week of June and commenced to lay at Christmas, and had been laying two months when mated in February. On 10th March I placed thirteen of the eggs in a small incubator, and on 2nd April eleven eggs hatched, the remaining two having chicks dead-in-shell. I purposely did not call in the assistance of a broody hen, but reared the chicks in a foster-mother. Of these chicks eight proved to be pullets and the other three cockerels.

As I intended breeding from these pullet chicks in the following spring, I fed them well until they were six months old, and then put them on to a breeding instead of laying mash.

Every one of the eight laid in October, and during the first year the pen totalled nearly two thousand eggs, and at the end of their second season the total was 3,605. By the time the pullets were in full lay the weight of each egg was not less than 2¼ ozs., while several of the birds were laying 2½-oz. eggs.

In the next breeding season these eight pullets were mated to a two-year-old male, and from the chicks hatched twenty-five pullets were selected to continue the experiment. The weight of egg of this third generation was again maintained, and only one bird of the twenty-five laid eggs under 2¼ ozs., while several laid 2½ and 2¾-oz. eggs.

From these twenty-five pullets I selected eight, and mated them to a second-year male. From the eggs laid I placed three sittings under broody hens with the following results:—(a) Eleven chicks out of twelve eggs, one dead-in-shell; (b) twelve chicks out of twelve eggs; and (c) thirteen chicks out of thirteen eggs. I sold a good many sittings from this pen as pullet-breds, and my customers had results as good as mine.

During this experiment I have been very careful to compare the pullet-bred pullets with pullets hatched from older birds and I have not yet found any point in which the pullet-bred birds are in any way inferior—in fact, on a percentage, they are better.

The stamina of the third generation shows no sign of weakening. The three original pullets and their eight chicks are still alive, while of the twenty-five, one caught a chill during its first moult and one other developed a prolapse of the oviduct. The weight of egg remains not less than 2¼-ozs., while some lay up to 2¾-oz. eggs regularly.

I might explain that I purposely chose the first three pullets on account of their large eggs. Two of them laying 2¾-oz. eggs and the other 2½-oz. My reason being that with such weights it would be easy to tell if the weight of egg diminished in the succeeding generations. The weight dropped slightly with the first chicks, and this I attribute to the male bird, who did not possess the large-egg factor, but in the next generation the average weight increased. In testing for fertility I discovered no difference from my older birds, which have a fertility percentage varying from 96 to 98 per cent.

A point frequently brought forward against pullet breeding is that the eggs do not hatch well in incubators. The fact that practically every fertile pullet egg will hatch under a hen whereas a good percentage will not hatch in an incubator, is not a point against pullet breeding, but against the incubator.

I have hatched 75 per cent. of these eggs in an incubator but I think that hatchability is largely controlled by the weather affecting the breeding stock.

For this experiment I chose White Leghorns, because I have found them extremely hardy and less liable to "throw backs" than most breeds. To breed from pullets of composite breeds such as Rhode Island Reds, would not be advisable if one wanted to breed for colour.

In conclusion, I would say that from my experiment, extending over four years, I have failed to find any reason against pullet breeding for egg production."

Correspondence.

B W.D. AND ROUP.

To the Editor of "Eggs."

Dear Sir,—Your advocacy of the "bath and clean irt" principle, as applied to poultry, in preference more modern and expensive methods of prevention id cure of menace (by inoculation or otherwise) can ot, I think, be repeated too often

I have thought of this in connection with the pro inence which has recently been given in "Eggs" to e alleged prevention and curative properties of Visol."

Mr. Brain could naturally no more eliminate Visol" from his interesting and valuable contribu ons to an important discussion on disease, than Mr. ick was able to keep King Charles' head out of his emorial. But it is surely carrying matters rather r to reverse the order of things by seeking to make e disease, or a number of diseases, fit our parti lar remedy?

By all means let manufacturers advertise their ures in the columns set apart for that purpose, and ive the poultry-keeper some choice as to the actual nedy he will apply. Some of us still think that a astic application of the "bath and clean shirt" prin le, coupled with a judicious use of—say, pure lphate of copper, may be as equally efficacious as, d far less expensive than, any nostrum on the arket.

I may, of course, be unduly prejudiced in classing st proprietors of patent medicines with the Doctor "Gil Blas," who applied the same remedy to all patients, no matter what their symptoms might be. bled them, and told them to drink hot water. ose who recovered doubtless became firm believers the treatment, whilst others who did not had no portunity of expressing an opinion, and this, from Doctor's point of view, was highly satisfactory.

Yours faithfully,
HUGH M. BAKER.

THE POULTRY FARMER AND HIS APPLIANCES FOR REARING CHICKS.

To the Editor of "Eggs."

Dear Sir,—In the issue of September 30th an article Major C. Hesketh appeared under the above ding.

Having made a very special study of chicken rear and the appliances most suitable for the purpose writer must take exception to certain of the state nts contained in the article referred to.

Major Hesketh classes all conical metal hovers in category, irrespective of the fact that some of se were designed by mere tinsmiths, whilst others are the result of many years of close study of "Biddy" and her nurslings

We all know full well that no "machine" can meet all the conditions of nature, though a near approach certainly can be attained. Major Hesketh states, *re* fresh air, "In the hover type this enters all round, and there is not, and cannot be, an efficient protection against draughts, though there is an idea that if the hover is raised above ground level, or screened by a curtain or a fender, that the draughts are prevented. Obviously this cannot be, for the fundamentals of the design are opposed to the exclusion of draughts"

Now the first hover of this type was designed by the present writer to meet a long-felt need, at a time when he was rearing large numbers of chicks.

Unless ground draughts in Major Hesketh's district are dissimilar to those in other parts of the world, he cannot fail to realise that the very construction of this hover must cause the harmful draught to be drawn by the lamp under the platform—away from the chicks—ensuring a steady and even circulation of hot air between the heating plates.

Fresh air is essential to health, but there is a vast difference between this and ground draught

The curtain is used not as a draught screen but as near as possible the comfortable homeliness of mother-hen's feathers; the sight of the chicks circled around the outer circumference of the radiated warmth with the curtain resting lightly upon their backs is sufficient proof to the observant poultryman that all is well and comfortable.

Perforated floors are wrong in principle obviously, the draught being diverted thereby from its harmless channel.

Nothing can beat a solid wood floor—as provided—if covered with absorbent litter to prevent undue ammoniation of excreta.

Yours faithfully,
A. POWELL.

SEX-LINKAGE.

To the Editor of "Eggs."

Dear Mr. Newman,—It is very good of Mr. Burn Murdoch to give his comments upon the above, but I am sorry he has not dealt with the important financial side of the matter. In my previous letter in dealing with a farm of 2,500 layers I endeavoured to make it clear that 800 would have to be pedigree stock for the production of the balance of 1,700. Let us go a little further than this: Say 1,000 of the layers were pedigree stock (Black Leghorns and Cuckoos), and the balance of 1,500 the result of the cross In usual practise on a 2,500 birds farm one would replace 1,250 each year; that would mean 500 of the pedigree birds and 750 of the cross. To produce this 750 sex-linked pullets one would roughly have to incubate 3,000 eggs. These would give us 2,250 chicks—and now, here is the point—we should only have to rear *half* of these chicks. That would mean halving the cost of brooder-house establishment, heating, feeding, and labour charges. It is beside the point for Mr. Murdoch to say "give me pure-breds." I stated just the same, with perhaps more emphasis. This is a commercial proposition, and as such it will stand or fall.

I gather from Mr. Murdoch's letter—erroneously perhaps—that he has been in the chicken farming business for a number of years; and, possibly, being a truly conservative Englishman, is a little disinclined to accept a new proposition. When chicken farming is a hobby one can afford to be so; but, if a profit has to be made, then one must consider any where or when it is possible to make a saving.

Doubtless I did not make myself clear in certain respects of my own methods of farming. In response to the first paragraph of Mr. Murdoch's letter may I state that I have upwards of 900 trap-nests in use on my farm, and that every pullet considered of sufficient value to be put into the laying-houses is trap-nested, and all those that lay more than 90 eggs by the end of March are trap-nested for the rest of the year. The breeders are chosen from the latter, provided they have laid a minimum of 180 2¼oz. eggs, and these are trapped until they are disposed of. So, to quote Mr. Murdoch, the "annexe" of 300 pure-breds (which I am sure I placed at 800) would not cost a great deal to run on this farm. And most commercial egg farms have realised by now, I think, that they must trap-nest. I am afraid I am rather apt to write and talk as if everyone did things properly; maybe they are the ones that matter most when dealing with problems of advancement of the serious business of poultry farming.

Thank you, Mr Editor, for allowing me to enlarge my views on this difficult problem.

Yours very sincerely,
W. R. MORRIS HAMMOND.

THE POULTRY FARMER AND HIS APPLIANCES.

To the Editor of "Eggs."

Dear Sir,—As my card will indicate, I am not a poultry breeder, but my qualifications permit me to take an intelligent interest in such appliances.

My wife, a member of the S.P.B.A., is an enthusiastic and intelligent breeder, but as they said in the army: "I am for it" when it comes to devices such as brooders and incubators. I think, with the help of some of my improvements and additions, together with her untiring watchfulness, she has obtained better results than many from the various types of brooders.

We have four or five kinds of those which Major Hesketh so adequately and justly disparages. The best description that I have for them is that "some are less worse than others." None of them makes the slightest attempt to automatically grapple with the wide variations of temperature prevalent at the time of the year when they are mostly used. I endorse all that Major Hesketh says in respect to the cheap, nasty, inefficient and extravagant lamps, with their ill-fitting chimneys and inadequate adjusting mechanism which does not permit of them being adjusted within fine limits. As they are installed on windy day all blow out immediately it is required t adjust, clear, fill, or even open to examine the chicks

Major Hesketh has faithfully dealt with the diff culties of cleaning, etc., and now that we have bot dilated upon the failures of the existing types, I hop that we shall not have to call for armed protectio from the makers thereof.

Your correspondent, however, talks tantalizingly a brooder he considers ideal. Does he only do th to make us all envious, or does he like the idea gloating over the many of us who will be runnin around these cold wintry nights, whilst he is restin comfortably and contentedly by his fireside? I be him to put us out of our misery and anxiety, an tell us whether and for what fee he will divulge th secret, or is he proposing to market it in the ne future, and if so to whom we can apply for particulars In the alternative I shall have to try and devise som thing to rival Major Hesketh in order that my wi and self may look forward to peace and contentme during the coming hatching season. If lamps are be the solution of the difficulty, I have an idea th a blue or atmospheric flame is the thing. I wond if Major Hesketh's brooder embodies this feature, if any of your readers know of such a lamp.

Yours faithfully,
FRANK G. CUNDY,
A.M.I.A.E., F.I.Ar.

FARMERS AND FOWLS.

To the Editor of "Eggs."

Dear Sir,—I entirely fail to see the point, or a point in "Birmingham's" letter in your issue October 14th. He writes of Dr. Crowther's "aft dinner speech," but after very carefully consideri his letter I fail to see how any other construction c be put on it, but that it is a very much "after dinn epistle." It is the kindest way of saying that obviously knows nothing of the subject on which has the temerity to write.

I have always followed Professor Malden's artic on agriculture with great interest, and was the mo astonished that he saw fit to make those most m- leading statements about poultry-keeping and t value of the egg as the food for man. He (Profes Malden) infers that all the food consumed by the h could be far more profitably used to keep man ali rather than the hen, and that half the wheat of th country is consumed by poultry. How will "Birmingham" agree with that? I can tell him that even i this is the case it proves more conclusively the necesity of keeping more and more poultry. If there wa no market for wheat, very much smaller quantit would be grown than there even is at present!!

But I suppose "Birmingham" does not consi arable farming is important or necessary to th country, and he certainly does not appear to ha given it a thought (even if he has the power to do so

He apparently reads carefully excerpts taken fro articles and papers, and forms his conclusions, whi e cannot express. He does not convey what he means, r I am sure none can fathom what he is driving at om his letter, except that he requires still cheaper ggs, cheaper table poultry, and cheaper food, irrespective of the conditions of the producer and the orkers in this depressed industry. No wonder he rites under a non-de-plume!!

He asks: "If anyone is able to point out in them Poultry, I assume) anything of substantial import etrimental to agriculture." I would like to answer is by saying I was bound to infer that Professor Ialden was trying to prove this, nay more, that it was ven detrimental to the interests of the nation; hence our excellent leader of September 16th, and the ter comments and *agreements*, until "Birmingham" aw fit to be sorry for the *absent* Mr. Malden

Yours faithfully,

J P HARDING

THE WADHURST BRANCH.

The Fifth Annual Show of the Branch was held t "The Hut," Best Beech Hill, Wadhurst, on Vednesday, September 30th. The judge was Mr. . J. Falkenstein, of Rotherfield.

There were 86 birds and 14 plates of eggs xhibited. Mr. G. W. Pritchard again won the hallenge Cup with a White Wyandotte hen, also Silver Spoon for a Light Sussex cockerel, Messrs. uff and Bennet Silver Spoon for White Leghorn ullet, Mr. E. Gardner, Silver Spoon for Rhode sland Red pullet.

The bags of meal, presented by the Heathfield nd District Poultry-keepers' Association, were on by Messrs. Luff and Bennet, A. E. Gallup, . W. Pritchard, and J. Everard. Prizes in the gg classes, given by Miss Hollis for best eggs in hite, Brown and tinted, were all won by J. verard.

Leghorns and Wyandottes still seem to be the vourite breeds in the district, but Rhodes are close third, and Light Sussex are steadily gaing ground. Some excellent birds were shown in l classes. In the duck exhibits the Buff Orpingn again takes the first place.

Utility Duck Club Notes.

By **HUGH B. CARRINGTON.**

In my last notes I believe I somewhat rashly volunteered to make further remarks about the moult among ducks. Since then several correspondents have written me on the subject. Among the questions asked is the following:—How long should a duck take to moult, and how long will it be before she begins to lay again?

This is an exceedingly difficult question to answer concisely, for many factors control both the time taken over the moult, and the time which will elapse before eggs are again laid. The chief factors are the breeding, feeding and management of the birds, their health, date of hatching, number of eggs laid prior to the moult, and that always very uncertain factor—the weather.

Perhaps the easiest way to answer the question is to give an actual example. To do this, and be sure of the facts it is necessary for me to name one of my own Fawn and White Runners, No. 842. She is typical of the good laying type, well bred, from a dam with a record of 212 eggs in her pullet year, by a drake out of a 314-egg duck. She began to lay on November 13th, 1924, started to moult on August 18th, and began laying again on October 5th. Her record up to August 18th was 232 very fine eggs, and she is now laying a magnificent egg of about 5ozs. in weight daily. Her actual rest was six weeks and five days—to my mind a reasonable and normal rest for a bird of this quality. It may safely be taken that such a rest is about the average for well-bred heavy laying ducks.

I have known many birds take much shorter rests; others much longer ones; but for their health I consider this off-period of nearly seven weeks most satisfactory.

She will very likely lay a batch of 50 or 60 eggs now with hardly a check, just when eggs are at a nice price. She may lay a great many more, but I hope not, as it will be much better from a breeding point of view if she rests again before her eggs are needed for incubating next year. The factors influencing the period of the moult and rest are most of them touched on in the details given of 842's history, but a word may be said about feeding. This was exactly the same throughout the rest period as it had been previously, that is, my usual ration for the time of year. Naturally when not egg producing, this duck eats far less than normally, but she was allowed to eat just as much as she wanted. In my opinion ducks are far better judges of how much they need than their masters or mistresses, which is my reason for counselling people never to ration the amount of mash given.

Finally I do not believe in adding linseed to the mash with the idea of hastening the moult. Surely we are already expecting a great deal of our birds,

(Continued at Foot of Previous Column).

ough I know there are some people who would like abolish the moult altogether.

If the duck is the right kind of bird she will take e right time over the moulting process, and it is a istake to interfere with nature more than is necesry in obtaining a reasonable profit.

A discussion on some of the other factors which fect the moult would be very interesting, but my n incomplete knowledge and lack of space forbid a rther dissertation now.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

N. R. (Hants) has 30 White Leghorn pullets, hatched April 15th, which have been doing extremely well up to about a week ago, when he began to notice feathers about the run and house, but could not find out the culprit to remove her, and now there are a lot more about, in spite of continually removing them. They are separated from hens that are moulting by a stretch of about 20 feet between the runs, and they cannot comfortably see one another. He moved the pullets into their winter quarters about a week ago. Now they are right off their food, the droppings very liquid and yellow, sometimes with blood in them. The feeding has been: Morning, one handful of grain, wheat, oats, and kibbled maize, between every three birds; dry mash, consisting of: 1 bran, 2 middlings, 1 S.G. oats, 1 maize meal (which he has just introduced), and 5 per cent. fish meal. The latter he is gradually bringing up to 10 per cent. Night feeding: One handful of grain to each bird. He has given them Glauber salts now and starving for 24 hours. He wishes to know if the mash is the best he can give, and whether there is anything he can do to brighten them up as they are now inclined to sit about, and to stop this premature moult and bring them into lay in due course, which would be, he supposed, in about a fortnight's time.—I am a little puzzled as to what my correspondent means. He talks about finding the culprit to remove her, and one imagines that he thinks his hens have been feather-plucking; but apparently they are dropping feathers, and this is very unusual with Leghorns hatched April 15th. Whether they have been very badly frightened by this continual removal or have been frightened in any way I cannot say, but this would occasion the moult. It would have helped matters had he sent me a sample of his foodstuffs. What is the fish meal like, "N. R."? The dose of Glauber salts was correct, if not too big a one, but I fail to see the advantage in starving them for 24 hours. The mash is quite a good one. I could have helped "N. R." a great deal more if he had sent me samples of the foods he is using. All he can do now is to feed the birds as he has been doing, but pay particular attention to the ingredients of the mash.

H. S. W. (Waterfoot) has rented some extra grass land, on which he wants to run poultry, but can only manage to attend to them once a day. He wishes to know how to feed for eggs, and whether I advise wet or dry mash, or grain alone, and whether he would be obliged to add clover meal or alfalfa during the winter months. The best thing he can do is to feed on dry mash, having this in hoppers always before the birds, and, in addition to this, have an automatic grain hopper. The mash should be (by measure) four measures of bran, three middlings, two maize meal, and one meat and bone meal. If we have a hard winter when the grass is of little value, it would be advisable to replace one measure of the bran with one of alfalfa meal. As he can only attend to the birds once a day, the automatic grain hopper would ensure their receiving the full amount of grain they require.

E. C. B. Boucher's Rhode Island Red (1924) Hen No. 41.
Record, 311. W.R. (S.P.B A), 89. Egg, 2⅛ ozs.

Modern Poultry Feeding.

By **TOM NEWMAN.**

FOOD AND HEALTH.

A correspondent writes:—

" During the early part of the week I noticed one 1924 hen cidedly off colour, off her food, and very dark about the head. e was a vigorous layer, and I put it down to ovary trouble, d thought no more about it On Wednesday I noticed a general tlessness amongst the hens and the late pullets, including the st 1924 hen I have. Yesterday I examined the latter and also sick hen, and found their crops hard but not unusually stended. I shut both up, gave each a dose of castor oil, and ssaged the crop Later in the day I repeated the massage d gave olive oil (during the day my wife gave them only ead and milk). This morning both had lost the darkness of mb, etc., and appeared much better. Their excreta during the ght was considerable, and of a greenish-blue colour.

Yesterday the trouble seemed to spread to the early pullets. the morning I noticed liquid excreta on the dropping boards, d last night both pens left over half their grain ration (they ared up the wheat, some of the oats, but refused the maize). e cockerels are as vigorous as ever, although on Wednesday I d a clear case of crop-bound amongst them. This I opened, d the bird is going on well.

I might mention that my egg yield has suddenly dropped to-y to 20 (all small and rather **white** eggs), whereas I have en averaging over 40 a day, and a finer sample of eggs I had wish to see. The grain is the same as used for the last ree weeks. I enclose samples. This consignment of mash I fed the first time on Sunday last, and in appearance it seems nilar to the usual mash supplied (sample enclosed).

Now everything points to the mash, but I should much appre-ate your opinion. Not one of my early pullets is showing signs moulting, although I am afraid this set-back may cause it.

A few from each pen are dark in the comb, many are off their ed, and a few are as active as ever. Now the cockerels have d the same grain and mash, although having some good mid-ings to use up I have given them 50 per cent. mash and 50 per nt. middlings.

(Sunday) To-day I find that the trouble has spread, especially nong the early and late pullets. Some are very dark in the mb, which in some cases has seemed to shrink and flop over. have handled these, and although they have eaten practically thing to-day, their crops are hard and full. To-day's egg pply, 22, small and white shelled. I tried all pens with maize ain to-night, but **all** (excepting cockerels) refused to look at although they eat fair amount of wheat and oats (mixed) fered after the maize.

I might add that the pelvic bones of all the affected birds e still open, showing that it has affected the layers."

Examination of the meat and bone meal sent vealed the fact that it contained a very high per-ntage of the hide and hair. It was not a good sample. he hide, of course, would be very indigestible, and e hair might have caused crop trouble, but the hard ops described by the writer were not due to this, ut to arrested digestion caused by musty food.

On examination of the mash sent I found it had a istinctly musty smell, and it is to this we must attri-ute the condition of the birds

I mention this principally because it would consider-bly help readers who are in difficulty in this way, if ey would look for signs of must in the mash, or in ny particular ingredient in the food, so that they ight take immediate action to prevent further ouble. One always suspects the fish meal or any rm of animal protein, in the first place. As I have reviously stated, much trouble in this direction has een caused by the excess of oil in the fish meal.

If the food is discovered to be musty, the wisest course is to scrap it at once, but if we decide to be economical (??) it might be scalded with boiling water before feeding. This will destroy the mould. I do not, however, recommend this latter course, as in any case mouldy food is not an encouragement to good appetites. Birds suffering from this trouble should be immediately given a mild dose of Epsom salts. Castor oil is not a good medicine for poultry.

It is a question here where a little observation may result in quick action, and a good deal of possible loss saved. Delay in such a case is dangerous, as the feeding of mouldy food, although it may not be fatal, will frequently upset birds enough to throw a healthy lot of birds into a moult, with a consequent loss in egg production.

In reply to a query last week I advised the Querist, whose birds were kept in an exposed position, to give no oats in the grain feed at this season of the year. The result of this has been a letter from "G. B.," who informs me that he had fed oats with good results, and cannot understand my advice.

That is hardly the point. I have no doubt that oats can be fed with fairly good results during the winter months, but maize is essentially a better egg producer than oats, because of its much higher oil content.

I was not arguing, as my correspondent seems to think, that you cannot produce eggs when feeding oats. That would be absurd. It is a question of which is the best food to produce eggs, and unquestionably maize is superior to oats in this respect. I would not recommend maize in any great quantity for growing stock, nor for fattening, as, in the latter case, it results in the accumulation of a great deal of internal fat which does not mean the production of ideal table poultry; but maize as an egg producer is undoubtedly superior to any of the other grains or cereals.

THE ANTI-STERILE VITAMIN.

This is Vitamin "E," and has recently been discovered. We are told that without it, both for male and female, the egg will not be fertilised. Formerly this vital principle was recognised as being in fat Soluble "D," but it has now been definitely shown that it is separate and distinct from fat Soluble "D." Recognised as the essential vital element without which the calcium (lime salts) and the phosphates cannot be laid down in the bone of the growing chick. In short, it controls the calcium and phosphate metabolism

As the result of a shortage of Vitamin "D," rickets will result.

Fat Soluble "E" exists abundantly in the organs of certain plants, especially seeds and green leaves. Drying does not impair its value, so that pulverised alfalfa leaves, if fresh, will form a good source of this vital element. It is also found in oils, while the Fat Soluble "D" and "A" are not; such oils as Wesson Oil, Olive Oil, and Cocoanut Oil have been tested. Also wheat germs, cottonseed oil contain it. Experiments have shown that milk fat and cod liver oil are poor in it.

The above is taken from the "Poultry Tribune" for October.

We must await events before we venture to comment on it. We are slowly making our way down the "Alphabet of Vitamins," having now arrived at "E," after a doubtful start with "A" and "B."

YORKSHIRE FEDERATION LAYING TESTS.

CUP WINNERS AND FINAL PLACINGS.

The final report of the Yorkshire Federation Laying Tests held in conjunction with the "Daily Dispatch" at Otley from September, 1924, to September, 1925, is issued to-day. The principal winners were:—

"Daily Dispatch" Gold Challenge Cup (with Silver Replica) for the best pen in the test, R. Rodwell, **Nelson.**

"Mrs. Clay" Silver Cup for the second best pen in the test, Mrs. Clay, Long Preston, W. Yorks.

"Miss Delaney" Silver Cup for the best "**Individual Bird**" in the test, Mrs. Clay, Long Preston.

Class A.: Section1. -White Leghorns.—"Tom Barron" Silver Cup and Gold Medal, R. Rodwell, Nelson; Silver Medal, Mrs. Clay, Long Preston; Bronze Medal, R. H. Fryers, Bradley, Keighley.

Section 2.—Black Leghorns.—"Frank Snowden" Silver Cup and Gold Medal, R. Rodwell, Nelson; Silver Medal, A. White, Malpas; Bronze Medal, Mrs. Clay, Long Preston.

Section 4.—White Wyandottes.—"Jack Wrennall" Silver Cup and Gold Medal, Dr. Helm, Newchurch-in-Rossendale; Silver Medal, E. Watson, Earby, Lancashire; Bronze Medal, A. Snowden, Pool, near Leeds.

Section 5.—Rhode Island Reds.—"Fred Simpson" Silver Cup and Gold Medal, Messrs. Sutton and Son, Little Hoole, Preston; Silver Medal, M. A. Hindmarsh, Skelton-by-York; Bronze Medal, Sharp Bros., Bell Busk.

Section 6.—A.O.V. (Heavy Breed).—"Will Hamnett" Silver Cup and Gold Medal (Lt. S.), Messrs. Davey and Sons, Sutton, Keighley; Silver Medal (Bf. R.), Messrs. Wright and Fortune, Riddleden, Keighley; Bronze Medal (Lt. S.), J. N. Readman, Gribthorpe, Howden

SINGLE BIRDS.

Class C: Section 9.—A.V. (Light Breeds).—Gold Medal, Wm. Wharton, Keighley; Silver Medal, Mrs. E. Kaye, Pool, near Leeds; Bronze Medal, Messrs. J. and W. Brayshaw, Keighley.

Section 10.—A.V. (Heavy Breeds).—"Sir Donald Horsfall" Cup and Gold Medal, Messrs. M. E. and A. Robinson, Bawtry; Silver Medal, H. Downsbrough, Bradshaw; Bronze Medal, Mrs. Hawkesworth, Pool, near Leeds.

The general poultry-keeper has little knowledge of the dimensions of the tests that have been so successful at Otley. There were 522 birds and 81 reserves. No fewer than 92,477 eggs were laid in trapnests, and 1,405 were floor eggs. The average egg yield for the 48 weeks was 183.2 per bird, and the average egg yield of reserve birds 156.

The total value of the eggs (excluding floor-laid eggs) was £827 13s. 3½d., or an average of £1 13s. per bird.

The tests for 1925-6 promise to be an even greater success than those for last year, for 723 birds have arrived at the test ground, an increase of 120 on last year.

White Leghorns again led the test with an average of 201.9. The highest individual bird records were 276 by a White Leghorn owned by Mrs. Clay and 271 by a Rhode Island Red owned by M. A. Hindmarsh, though in the single bird section the highest egg value was made by a Light Sussex owned by A. Robinson (247 eggs).

TOTAL FOOD CONSUMED.

It is interesting to find that the total amount of food consumed was 184 cwt. of corn, 229½ cwt. of meal, and 31 cwt. of shell grit—a total of 444½ cwt. The value of the food consumed was £127 3s 6d. for corn. £177 8s. 3d. for meal and medicines, and £9 7s. 6d. for grit, making a total of £313 19s. 3d. Each bird consumed on an average 86 lb. of food, equal to 11s. per bird.

The average egg value of the various breeds were.—White Leghorns. £1 16s. 2d ; Black Leghorns, £1 15s. 0½d.; White Wyandottes, £1 13s. 7½d.; Rhode Island Reds, £1 11s. 9d.

In the tests 12 birds have laid 250 eggs or over.

Section 1.—R. Rodwell, Nelson, 1160 eggs; Mrs. Clay, Long Preston. 1065; R. H. Fryers, Bradley, Keighley, 1073.

Section 2.—R. Rodwell, Nelson, 1123; A. White, Malpas, Cheshire, 1049: Mrs. Clay, Long Preston, 1020.

Section 4.—Dr. J. F. Helm, Newchuch-in-Rossendale, 1032, E. Watson. Earby, 1017; A. Snowdon, Pool, Leeds, 1073.

Section 5.—Sutton and Son, Little Hoole, Preston, 1080; M. A. Hindmarsh, Skelton, York, 884; Sharp Bros., Bell Busk, 892

Section 6.—Davey and Son, Sutton, Keighley (L.S.), 923; Wright and Fortune. Keighley (B.Rk.), 951; J. N. Readman, Howden (L.S.). 888.

Section 9.—Wm. Wharton, Keighley (W.L.), 241; Mrs. E Kaye, Pool, Leeds (W.L.), 241; J. and W. Brayshaw, Keighley (W.L.), 241.

Section 10.—M. E. and A. Robinson, Bawtry (L.S.), 247; H. Downsbrough, Bradshaw (W.W.), 258; Mrs. Hawksworth, Pool (W.W.), 209.

WYE COLLEGE DUCK LAYING TEST, 1924-1925, held in conjun tion with the N.U.P.S. and U.D.C., at the South-Eastern Agricu tural College, Wye, Kent.

FINAL REPORT.

Report for the Twelfth and Final Period (September 5th October 2nd, 1925).—The total number of eggs laid during th period (28 days) has been 1,629, giving an average per bird 10.7 eggs. as compared with 10.9 during the eleventh period. Th total number of eggs laid to date has been 23,722, which give an average per bird of 156.06 eggs.

Health.—The health of the birds throughout the period ha been good. Moulting has continued at about the same rate in the previous period.

Positions.—The leading position in the whole test is taken b Miss Harrison Bell's Pen No. 11 (Khaki-Campbell), which ha laid a total of 1,123 eggs, which gives an average per bird 224.6 eggs Capt. R. A. Long's Pen No. 1 (Khaki-Campbell follows a good second, with a total of 1,090 eggs. giving an ave age per bird of 218 eggs. This pen contains the bird (No. 5 which has made the highest sequence during the test, viz., 1 eggs without a break. Her final score is 261 eggs.

The highest individual duck records are:—Miss Harriso Bell's K.C. No. 51. 277 pts.; Capt. R. A. Long's K.-C. No 5, 26 Miss Harrison Bell's K.-C. No. 54, 258.

The leading pens in the Breed Sections are:—

Khaki-Campbells.—Miss Harrison Bell's Pen No 11, 1118 pts Capt. R. A. Long's Pen No. 1, 1089.

Indian Runners.—Mr. W. R. Partridge's Pen No. 19 (W.), 91 Messrs. R. A. and A M. Johnson's Pen No. 13 (W.), 899.

Buff Orpingtons.—Capt. W. O'G. Cochrane's Pen No. 22. 76 Mr. C. C. Chittenden's Pen No. 24, 564.

Magpies.—Mr. C M. Goode's Pen No. 26 (B. and W.), 830; M F. Boothroyd's Pen No. 27 (B. and W.), 737.

LIST OF AWARDS.

Silver Cup. presented by the South-Eastern Agricultural C lege, for the highest pen score in the Khaki-Campbell Sectio won by Miss Harrison Bell, Welwyn, Herts. Pen No. 11. Sco 1118.

Silver Cup, presented by the South-Eastern Agricultural C lege, for the highest score in the Indian Runner Section, won W. R Partridge. Esq., Cirencester, Glos Pen No 19. Score 913.

Silver Cup, presented by the South-Eastern Agricultural Co lege, for the highest score in the Buff Orpington Section, won Capt. W. O'G. Cochrane, R.N., Ropley, Hants. Pen No. Score 769.

Silver Cup, presented by the South-Eastern Agricultural C lege, for the highest score in the Buff Orpington Section, won C. N. Goode, Esq., Bletsoe, Bedford. Pen No 26. Score 830.

Certificates of Merit will be awarded by the South-Easte Agricultural College to the following, whose pens have scor an average of 170 or more eggs per bird:—Miss Harrison Be Welwyn, Herts. 1118 pts.; Capt. R. A. Long, Shefford, Beds, 108 Miss E. H. Lewer, Horeham Road, Sussex, 1002; Capt. P. Thompson, M.C., South Milford, Yorks., 984; Major J. G. Dugdal Cirencester, Glos., 938; Miss A. E. Barr, Bentley, Suffolk, 93 Mrs. M. A. Gibson, Tonbridge, Kent, 911; H. W. Youngs, Esq., No wich (four birds only), 852. Indian Runner Section:—W. Partridge, Esq., Cirencester, Glos., 913; Messrs. R. A. and A. Johnson, Chalford, Glos., 899: The Molassine Co., Ltd., Twyfor Berks, 859.

HANTS COUNTY LAYING TRIALS.

Figures are Eggs for Twelfth Period and Grand Total respectively.

Section A.—Capt. A. Munro-Spencer (W.L.), 60, 4859; Mr. H. Hunter (W.L.), 25, 4786; Mrs. Guy Harper (B.L.), 54, 4435; Mr. F. C. Holdaway (W.L.), 41, 4392; Mr. R. McKenzie (W.L.), 4 Capt. D. W. Gunston (W.L.), 73, 4162.

Section B.—Mrs. J. M Drew (Buff Rk.), 56, 5528; Capt D. Gunston (W.W.), 46. 4324; Mr. R. McKenzie (W.W.), 35. 4190; M Edwards (R.I.R.), 43, 4047; Mr. H. R. Hunter (R.I.R.), 33, 3939; F. C. Harvey (R.I.R.), 36, 3721.

Final Report of the Laying Trials 1924-25.

The year just ended has been a more successful one bo from the point of view of health of the birds and egg productio

The winning pens in each section show an increase of eg over the winners of last year's test.

The leading pen in Light Breeds last year showed an avera of 146 1st and 2nd grade eggs, and this year the leading pen the same section shows an average of 181.7 1st and second gra eggs.

In the heavy breeds last year the average of the leading p was 173 1st and 2nd grade. while this year the leading pen of t section shows an average of 200.7 1st and 2nd grade.

Only one pullet again this year reached a total of 200 grade. and this was the same breed as the only bird to rea this figure last year—a Buff Plymouth Rock. and again t shows an increase on last year. The pullet in the last test reach this total laid 214 1st grade and 1 2nd grade egg; this ye the highest record is 196 1st grade and 10 2nd grade eggs.

The National Poultry Council Report.

The Quarterly Meeting of the National Poultry uncil was held at 16, Bedford Square, on October rd, by kind permission of the British Dairy rmers' Association, the President (Mr. Clem atson) being in the chair.

The minutes of the previous meeting were read d confirmed.

Mr. Edward Brown, in the absence of the easurer, presented his report. He drew attenn to the need for arousing public interest in the rk of the Council. He felt that the work had d to be very greatly restricted. There was gent need that the income should be greatly ineased, and he called upon all those present to do eir utmost to assist in placing the Council on more satisfactory footing.

S.P.B.A. CONTRIBUTION.—Mr. Tom Newman, cretary of the S.P.B.A., said there had been a ry generous response on the part of members the appeal for the funds of the National Poultry uncil, and he had great pleasure in handing er to the Treasurer a cheque for 200 guineas. had received instructions from the Council of e S.P.B.A. to point out that in the past four ars the S.P.B.A. had paid into the Exchequer the National Poultry Council the sums of **100 ineas, £300, £256, 200 guineas,** and the Council t it advisable to say that the National Poultry uncil must not rely upon their making this peal each year, for they had schemes of their n which require financing, and, while they would t definitely say there would be no further appeals, e National Poultry Council must not consider at they could look to this as a regular source income.

The President (Mr. Clem Watson) proposed that very hearty vote of thanks should be accorded to e S.P.B.A. for their generosity in contributing to e funds of the N.P.C. He pointed out that the P.B.A. had in previous years come to the rescue en they were in jeopardy, and he thought that other societies should endeavour to imitate their ample; that, as a fancier, he was bound to say at he felt that the "Fancy" was not pulling weight, but he was making a special appeal them to support the N.P.C. within the next two three months. Professor Willard Thompson said had great pleasure in seconding the President. e resolution was then put and carried amidst plause.

The President said that they had received a pernal contribution of £20 from Mr. A. H. Brain, d they all appreciated his generosity.

Mr. Brownson spoke of the generosity of Mr. ain in his personal contribution, also of the great sistance he had been to the Council, and the great work he had done. He proposed that a very hearty vote of thanks be accorded him, and that it should be recorded in the minutes. This was seconded by Mr. Tom Barron, and carried unanimously.

The President reminded those present that his bird "George" had collected £50 at Wembley for the Council. "George" was loudly applauded.

EXECUTIVE COMMITTEE.—The Executive Committee report was then submitted by the Chairman (Mr. Tom Newman), who formally moved its adoption. This was seconded by Mr. Stanley Street-Porter, and agreed.

The Executive beg to report that it has held two meetings since the last Council on July 17th, 1925.

Administration.—In accordance with the changes in officers, the accounts have been transferred from Lloyd's Bank, Nuneaton, to Lloyd's Bank, Law Courts Branch, London.

Finance.—Statements will be presented as to the balances in Bank in the various funds. In view of the constantly increasing demands upon the Council in a multitude of directions, involving expenditure which cannot be avoided if the purposes of the Council have to be realised, it is imperative that a considerable increase of income shall be secured, in which direction the co-operation of all members of the Council and the societies, clubs and public bodies which they represent, is essential. Had it not been for the generosity of one society—the Scientific Poultry Breeders' Association—there would have been a heavy deficit during the last three years. The time has arrived when every section of the poultry industry must take its reasonable share, otherwise the work of the Council cannot be continued. This question is commended for serious consideration and action.

Patron.—The following has been elected as patron:—Dr. J. L. Rosedale, The Hermitage, Wadhurst, Sussex.

Conference on Marketing.—In conformity with the resolution adopted at the Chester meeting in April last, arrangements have been made for a representative Conference on the Marketing of Eggs and Poultry, to be held at the Holborn Restaurant, London, in January, 1926, to which invitations are being issued. It is hoped that there will be a large attendance of those concerned in production, collection and distribution. From the fact that some of the problems which are presenting themselves at the present time are specially important to farmers, and specially concern the supplies marketed by them, the Conference is being jointly convened by the National Poultry Council and the National Farmers' Union. It will consist of representatives of societies and those engaged in distribution, and will not be open to the public. The National Poultry Council is asked to appoint six delegates.

Poultry Farmers and Income Tax.—The test case which the Inland Revenue authorities have declared their intention of carrying into the High Court of Justice has not yet been heard. What are the reasons for delay have not been stated. Until an authoritative decision has been obtained which will be accepted as determining whether poultry farming is husbandry within the meaning of the Finance Acts, those engaged in this pursuit are subject to the pressure of the Income Tax collectors, who, in the majority of instances, ignore the decisions of special commissioners given in nearly every section of the country, to the effect that poultry farmers should be assessed under Schedule B, as are those engaged in general agriculture. Several additional cases have recently been decided to that effect. So far as is known, every case submitted to special commissioners has been in favour of the view held by the National Poultry Council. In not a few instances Income Tax inspectors have accepted these rulings when, upon the advice of the Council, the facts have been submitted to them. Attempts have been made, however, by others to introduce factors, such as the amount of food grown for the poultry. These have been resisted, as we are advised on high legal authority that they do not affect the main issue. The Council's officials have continued to give advice in all cases asked for.

Liability of Vendors of Eggs and Poultry.—Following upon announcements made that the Sale of Foods Act, 1895, extends the liability of vendors of eggs for hatching, day-old chicks and stock birds to an extent which is practically unlimited, inclusive of influences over which they can have no control or without their knowledge or power, it is imperative that those who offer eggs or birds for sale shall take steps to protect themselves by printing upon their letter paper and invoices announcements that they liability is limited to delivery of healthy birds, or that eggs supplied for hatching shall have, in addition to being procured from healthy stock, no further guarantee than that of fertility. On the other hand, if, as in some cases brought under notice, eggs or birds are sold in which the presence of disease is obvious, purchasers must be defended against such dishonest practices. It is evident, however, that attempts are being made to use the Act referred to in a manner which will involve very heavy costs upon breeders to defend themselves, and which, if continued will go far to jeopardise important branches of the poultry industry. This is evident from the fact that claimants have declined in some instances to submit their cases to the Arbitration Board when the vendors were willing to do so, but are carrying them into the law courts.

Arbitration Board.—This Board has now been formed and is at the disposal of those engaged in poultry husbandry. A draft agreement for signature by the parties concerned has been prepared by the honorary solicitors, to whose generous help the Executive Committee is greatly indebted. There appears, however, to be very erroneous ideas as to the constitution and functions of the Arbitration Board. From some of the letters received, parties to disputes assume that they have nothing to do but report to the National Poultry Council and the Arbitration Board will take up their cases without expense to themselves. The object in its formation is, as far as possible, to prevent resort to the law courts, and to secure what appears to be equitable settlement for both parties, thus preventing outlay in legal charges. The National Poultry Council cannot be expected to meet the costs of arbitrations, or to incur any responsibility for preparation of the respective cases. The Arbitration Board sits to hear the evidence of both parties to any case submitted, who must be prepared to pay the costs of hearing and accept the decision arrived at.

Poultry Disease.—The signs that there is an apparent increase of disease among poultry flocks in different parts of the country, in some directions threatening to assume an epidemic form, emphasises the resolution adopted by the National Poultry Parliament at Harrogate that a Conference on Diseases shall be convened. The Executive Committee are considering the subject and hope to make an announcement at an early date. One of the most difficult problems is that of dissemination of infected stock whether privately or at auctions and markets. This question has on several occasions been before the Council. Up to the present time nothing has been determined, mainly by reason of the cost of inspection and the reluctance of many local authorities to undertake its responsibility. Special attention was called at the last Council by Mr. Marcus Slade to the fact that Local Sanitary Authorities have already power to take action in respect to cleanliness of pens and crates and exposure for sale of diseased birds. All cases of neglect in the former or illegal action in the latter should at once be reported to the sanitary authority, and it is suggested that poultry societies and private individuals should make it their business to see that the law, which appears to be adequate, is enforced by the local inspectors, and that whenever birds so diseased are sent by rail, the first step is to bring such cases under the notice of the local authorities. In this way what is a serious danger could be largely checked. The same applies to birds sent to exhibitions in a diseased condition.

Killing of Fowls by Dogs.—Several further cases have been reported since the last Council. A number of these have been submitted to the Ministry of Agriculture and Fisheries, and it is hoped that a Bill will be passed by the legislature affording owners of poultry the same protection as have those of cattle—that is, dog owners shall be responsible for any loss arising from their worrying or killing poultry.

Certificates for Elementary School Teachers.—In the report to be presented by the National Poultry Diploma Examination Board a proposal is made, emanating from the Board of Education, to the effect that the National Poultry Council shall issue certificates to teachers in elementary schools who undergo a course of training in poultry husbandry and pass an examination as arranged by the National Poultry Diploma Examination Board. The desirability of introducing this subject into the curriculum of rural schools is generally recognised, in which case it is o the utmost importance that teachers shall be qualified to give instruction. The question, therefore, is commended to the careful consideration of the Council.

At the National Poultry Parliament, Harrogate, a resolution was again adopted in favour of the institution of a Poultry Manager's Certificate. As this is largely a question of policy and of finance, the National Poultry Diploma Examination Board awaits the instructions of the National Poultry Council.

(Signed) TOM NEWMAN,
October 22nd, 1925. Chairman, Executive Committee

The Secretary, Mr. Edward Brown, speaking o his recent visit to America, said that he had conveyed the greetings of the Council to the American Poultry Association and the American Association of Instructors and Investigators in Poultry Husbandry, and read the following two letters :—

AMERICAN ASSOCIATION OF INSTRUCTORS AND INVESTIGATORS IN POULTRY HUSBANDRY.

"On acceptance of greetings from the National Poultry Council of England.

Whereas, our Association has been the recipient of a personally delivered letter of greeting from the National Poultr Council of England and Wales, and

Whereas, we feel most highly honoured by the presence their Secretary, Mr. Edward Brown, F.L.S.

Be it resolved, that our Secretary be instructed to write reply of thanks to these recognitions.

Be it further resolved, that he be instructed to incorporate i this letter our feeling of admiration for the splendid work the are doing, our feeling of deepest respect for the personel of the organisation and our feeling of co-operation that finds us read at all times to help our sister organisation across the sea. W need no resolution to express to Mr. Edward Brown, F.L.S the deep pleasure and honour we have had in his presence wit us."

(Signed) J. C. GRAHAM.
Mrs. G. R. SHOUP.
D. H. REID.

AMERICAN POULTRY ASSOCIATION,
(In Convention Assembled Des Moines, Ia, August 12th, 1925

"Whereas the American Poultry Association has this da been honoured with a visit from Mr. Edward Brown, Londo bearing testimonial of the good wishes and esteem of t National Poultry Council of England, and

Whereas the American Poultry Association deeply appreciat this evidence of interest and mutual helpfulness on the part the poultry fanciers and breeders of Great Britain, and further realise that the continued friendly interest of the poult breeders of the great English-speaking countries of Great Brita and the United States will not only aid in the development the poultry industry, but will also play a part in the preservati of the International goodwill of the Governments and peopl of these two countries; that goodwill so much desired on t part of the overwhelming majority of the citizens of the Unit States for the preservation of the world peace and the spread liberty held so dear by the Anglo-Saxon people of the earth.

Therefore be it resolved that we, the members of the Ame can Poultry Association, express our heartfelt thanks to t Poultry Council of England for its letter of encouragement, a

Be it further resolved, that we pledge the poultry breeders England our co-operation in the advancement of the industr and say to them that we rejoice in the progress made and lo forward in the confident hope that we may continue to labo side by side for the advancement of not only agriculture a livestock, but for that which is of greater value, the advan ment of liberty and the pursuit of happiness on the part of t Anglo-Saxon peoples of the earth, and may God grant that t time shall never come when we cannot reach an accord on t questions which will confront us from time to time."

(Signed) THOMAS R. RIGG,
President, American Poultry Association.

REPORT OF THE NATIONAL POULTRY IPLOMA BOARD.—Mr P. Hedworth Foulkes, hairman of the Board, reported that the examina- ion had been held at the Harper Adams' College. welve candidates had presented themselves; three ad passed the examination in all subjects:—Miss I. Bremner, Mr. F. C. Bobby, Mr. I. W. Rhys. Mr. W. Rhys has not yet completed his practical train- g, and the diploma will be granted to him when atisfactory reports have been received in compliance ith Regulation II.

He reported that the National Poultry Diploma oard had been approached some months ago by the oard of Education with respect to teaching of Poul- ry Husbandry in Public Elementary and Secondary chools, as it was felt that if teachers were to give struction it was necessary that they should be quali- ed. The Board had felt that it was desirable that the ational Poultry Council should undertake this duty, nd a joint committee of the Examination Board and he Board of Education had held several meetings prepare a scheme which might be submitted to the ational Poultry Council. The scheme which had een adopted had now been submitted. The scheme roposed the granting of a certificate limited to per- ons in training for, or actually engaged in teaching in lementary or Secondary Schools. Mr. P. Hedworth oulkes spoke in support of the proposal, which was econded by Mr. Tom Barron, and carried.

MANAGER S CERTIFICATE.—Discussion took lace on the question of a Manager's Certificate. The esolution by the N.U.P.S. had been agreed to by the ational Poultry Parliament, but the Board felt that ey could not accept instructions from the Parlia- ent, but only directly from the Council. After a ng discussion it was agreed that the National Poul- y Diploma Board should be asked to give the ques- on its consideration, and report to the Council.

MARKETING CONFERENCE.—Mr. Edward rown informed the Council that the conference on arketing of Eggs and Poultry was to be held at the olborn Restaurant in January, 1926. The conference as been jointly convened by the National Poultry ouncil and the National Farmers' Union, and will nsist of Representatives of the societies, and those gaged in distribution, and will not be open to the blic. The National Farmers' Union had expressed e wish that the Press should not be present, but it d been agreed at the Executive Committee meeting the previous day that a report of the proceedings ould be issued to the Press.

The Council then proceeded to elect six delegates. ome difficulty occurred as it was pointed out that ch society would have the right to appoint two of s members as delegates, and there might be over- pping. Eventually the following were elected:— essrs. Stanley Street-Porter, J. G. Kitson, W. amnett, A. T. Walker, P. Hedworth Foulkes, and H. Brain.

RECORD OF PERFORMANCE.—The Treasurer ad a letter from the Ministry of Agriculture ex- essing regret that they were unable to proceed with e scheme which had been submitted to them by the dvisory Committee.

Dr. Crowther moved that the Ministry should be asked for reasons for turning down the scheme. After a considerable discussion, in which Mr. Francis put the position of the Ministry before the members, Mr. Street-Porter moved a resolution to the effect that the Ministry should be asked to reconsider their decision in view of the fact that the scheme in operation in Canada had created such a demand for Canadian stock that there was likely to be a great restriction on the importations of British Pedigree Stock.

Dr. Crowther withdrew his original resolution, and seconded this, which was carried unanimously.

Mr. Tom Barron complained that the poultry-keeper had no idea what the scheme meant. They had been kept in the dark. They wanted to know something about it before they were committed to say.

Mr. Street-Porter denied that this was the case, and Mr. Francis explained the position to the representatives of the National Poultry Council Advisory Committee. Their position was a purely confidential one. They could give no information, and any reports could be issued by the Ministry alone. There had been a great deal of misrepresentation in certain sections of the Poultry Press by those who were writing without knowledge. He was confident that they had the best intentions, but they were wrong. The Ministry had been simply trying to carry out a resolution submitted to them by the National Poultry Council. So far as he was aware there were no objections to the scheme becoming public.

Mr. Brown spoke of the criticism levelled at the National Poultry Council by certain sections of the Poultry Press. At the meeting of the Council at the Harper-Adams' College in May, after an exposition of the Canadian Record of Performance Scheme by Mr. Ernest Rhoades, it had been proposed by Mr. Street-Porter, and seconded by Mr. A. T. Walker, that the Ministry be asked to organise a similar scheme in this country. That resolution had been forwarded to the Ministry. The Council had heard no more of it officially until it received the letter from the Ministry stating that they were unable to go forward with the scheme. It was unfair to blame the Council or to say that they had gone behind the Poultry Industry.

The folowing motion was proposed by Dr. Helm on behalf of the Lancashire Federation, and seconded by Mr. Frank Snowden:—

"That the National Poultry Council consider a scheme for keeping a Register of egg production at the National Poultry Council's Registered Laying Test, with a view to issuing certificates by the National Poultry Council."

Considerable discussion followed.

Dr. Helm, in introducing the motion, said the object was to keep a record of individual birds who had put up good records in the Laying Test. The advantage would be that the buyer would know to whom to apply when he was in need of good stock, and he would have the actual record of the bird. There was nothing of this kind existing at present, and he suggested that it was far better than the proposed Record of Performance Scheme, because it would not be dependent upon a casual inspection, or on the good word of the owner of the bird, but upon the official trap records of the Laying Test.

Mr. Tom Barron strongly supported the resolution

Mr. Tom Newman said that he was asking for information. He was somewhat puzzled as to know what was meant. Was it really the record of eggs laid in the test—a record of production? Dr. Helm had spoken of "Tested birds." What did he mean by tested"? Would there be a Board or Committee appointed to examine each individual bird to see that it possessed breed characteristics, type, etc.? Would the pedigree of the dam and sire be given? The actual record of production was no guarantee as to the breeding value of the bird.

Dr. Helm, in reply, said that the bird would have passed the committee at the Laying Test. This was to be an actual record of performance.

After a long discussion it was eventually agreed that the motion should be referred to the Laying Trials Committee for their consideration.

WORLD'S POULTRY CONGRESS, 1927. — Mr. Edward Brown made a few remarks in reference to the World's Poultry Congress in 1927, which he said he hoped would have the support of the whole industry.

This concluded the business of the meeting.

THE EAST ANGLIAN EGG-LAYING TEST.

REPORT FOR TWELFTH AND FINAL MONTH

(from 20th August to 16th September, 1925).

The number of eggs recorded during the last four weeks of the test was 1,918—a decrease of 225 compared with the previous month.

The number of eggs laid during the twelve months (48 weeks) reached 30,198—the total being made up of 22,176 first grade, 7,737 second grade, and 285 underweight, the average per bird amounting to 153.29.

In Section 1 the pen of White Leghorns belonging to The Dale Egg Farm caught and passed Capt. E. A. Wheeler's pen on the last day of the Test, this being the only change in the leading positions in all sections, although other changes occurred in second and third places.

The Silver Spoons presented by the N.U.P.S. for the Best Heavy Breed and the Best Light Breed Birds laying the largest number of first-grade eggs were won by the Greensward Poultry Farm with a White Wyandotte, and by Mr. E. Fearon with a Black Leghorn, with scores of 237 and 222 respectively.

Mr. Turner's pen of R.I.R.'s reached the fine total of 1,052, of which only 27 were second grade.

The highest score of any bird was 268 by a White Leghorn belonging to The Dale Egg Farm, and in all 33 birds laid 200 eggs or over.

The health of the birds has been excellent throughout the whole period of the Test, and the expressions of satisfaction which have been received as to the condition of the birds upon their return has given much pleasure to the Commtitee.

The birds which have been competing under the name of Mrs. Pierce-Grove have been purchased by Mr. J. H. C. Liddon, Blundells, West Monkton, Taunton.

Cups and Medals will be despatched to winners as soon as possible.

In issuing this, the last report, the Committee wish to thank all patrons for their kind support.

W. T. WILLIAMS, Hon. Secretary,
"Millfields," Rayne.

Figures are Eggs for Month and Total Eggs to Date respectively:—

Section 1.—White Leghorns.—Dale Egg Farm, 60, 956; Capt. E. A. Wheeler, 29, 854; T. R. Berry, 4, 515.

Section 2.—Any Other Non-Sitting Breed.—Miss E. Cavanagh (Anc.), 50, 892; Maj. R Lloyd George (Anc.), 73, 864; T. R. Berry (Sic .F.), 29, 482.

Section 3.—White Wyandottes.—Misses D. & M. Keech, 55, 821; Mrs. Pierce-Grove, 68, 823; S. & T. Greenall, 54, 662.

Section 4.—Rhode Island Red.—H. Turner, 76, 1052; A. Gawthropp, 78, 952; Miss E. Cavanagh, 80, 811.

Section 5.—Any Other Sitting Breed.—T. H. Sochon (Lt. S.), 72, 772; Misses D. & M. Keech (Lt S.), 39, 579; E. D. Montgomerie (Bf. R.), 16, 213.

Section 6.—Single Bird, Any Variety Light Breed.—F. Fearon (Blk. L.), 20, 234; H. Dearden (W.L.), 19, 221; W. S. Lane (W.L.), 9, 215; G. A. Richards (W.L.), 19, 211; Miss P. Abercrombie (W.L.), 17, 207.

Section 7.—Single Bird, Any Variety Heavy Breed.—Greensward Poultry Farm (W.W.), 22, 242; R. Champion (W.W.), 19, 216; M. Moreton (R.I.R.), 20. 192; R. Champion (Lt. S.), 21, 193; Nalder & Smith (R.I.R.), 12. 182.

NOTE.—Each Pen in Section 1-5 consists of 5 Pullets. Each Pen in Section 6-7 consists of 1 Pullet.

Scientific Poultry Breeders' Association.

ANNUAL GENERAL MEETING.

The Annual General Meeting of the S.P.B.A. wa held in the Council Chamber at the Holbor Restaurant on Wednesday, October 21st, the Pre sident (Mrs. Hunter) being in the chair.

There was a large attendance of members.

The President, in welcoming those present, con gratulated them on the great success which ha attended their efforts during the past year. Sh did not intend to anticipate the reports of th various committees, which they would find interest ing and encouraging.

There had been a steady increase in th membership, and this should please them, as th industry had passed through a period of depressio Before calling on Mr. Newman to read the minutes the President presented him with a beautifull bound and illuminated album, containing the name of the 1,400 subscribers to his wedding present—the album, which is of great beauty, is the wor of Mr. C. B. Gething, of Minster Street, Salisbury

The Secretary, before reading the minutes, sai he must take advantage of the opportunity of onc again thanking them for their very great kin ness. He could never thank them adequately, be cause he felt their kindness too keenly, to enabl him to express himself, but he could assure the they had greatly contributed to the happiness himself and his wife.

The minutes of the last meeting were then rea confirmed, and signed.

The Secretary read his report, which was pu lished in last week's issue of "Eggs." H formally moved its adoption, and it was agreed t

Questions were confined to that part relating t the Food Purchase Scheme. Mr. Coates, Secr tary of the Heathfield Co-operative Associatio complained that Mr. Newman had refused to gi him the formulae of the mashes supplied, and h had once advised them never to buy mashes unle the formula was given. Members of the Heat field Association had asked him to procure th formulae for them, so that they could supply th mashes. Mr. Newman, in reply, said he did n recollect having given the advice to which M Coates referred. It was possible he had done so but in any case he was not speaking of firms repute, and the name of the S.P.B.A. behind mash was a sufficient guarantee. If the members the Heathfield Association wanted the mashes, the could be supplied through the S.P.B.A. if they we members. It was necessary when they we making arrangements with the firms who suppli the mashes to give them a "quid pro quo," a he had promised the formulae should not be su plied.

Capt. Orford spoke of the great value of t scheme, which, he said, had enabled them to ba gain with the millers, and obtain a considerab iction in price. He moved that prices should published each week in "Eggs." Mr. Frank wden supported. Mr. Newman promised to ply.

REASURER'S REPORT.—The Treasurer (the d. H. Mudie-Draper) submitted his report, ch has already been published in "Eggs." The sfactory financial condition was commented on, the adoption of the report, formally moved by Treasurer, seconded by Mr. Hemelryk, was ed to.

EGGS" COMMITTEE REPORT.—Mr. J. G. on (Chairman of the Committee) submitted the wing report:—

"There is nothing of great importance to report in connection with 'Eggs.' In spite of depression in the industry the circulation has kept up well. The many appreciations received from readers of the paper bear testimony to the success of the Editor in his efforts to make it more interesting and useful to those engaged in the industry. A year or two ago it was foreseen that the time was approaching when 'Eggs' instead of being a considerable expense to the Association would be the means of increasing its income, and enable it to apply a portion of its funds to experimental work. Last year we were able to report that the expected time had come, and there was a alance on the right side.

It is pleasant to be able to say that this satisfactory state continues, and, although the irculation does not now increase at the rapid ate it did, it is quite satisfactory.

There is one matter that surprises the Committee—namely, the circulation is about double he membership. Why! O! Why are not all eaders members of the S.P.B.A.? They little now the benefits that are passing them by."

e adoption of the report was moved by Major seconded by Mr. Mudie-Draper, and carried mously.

ECTION OF OFFICERS.—The President l on the Secretary to announce the result of lection of members to the Council.

lected.—Mr. J. H. Dowden, 433 votes.
Mr. Hedworth Foulkes, 361 votes.
Miss Maddison, 344 votes.

lected.—Mrs. Clay, 211 votes.
Mr. Phelan, 178 votes.

521 members recorded their votes.

ment was made on the comparatively small tage of members who voted. Capt. Orford his was probably due to the fact that the ers were not personally acquainted with who represented them, and caused a good f amusement by suggesting that the Secrehould call the names of those members of uncil present, and they should stand up, so that they might know them. This was done, the Secretary calling the names and the members rising in their seats.

Capt. Orford then moved that, in future, voting papers should be sent to all members of the Association by post, this was seconded by Mr. Frank Snowden, and carried unanimously.

ELECTION OF AUDITOR.—Mr. Mudie-Draper proposed the re-election of Mr. W. Keller Snow as Hon. Auditor. This was seconded by Dr. Everard, and carried unanimously. Mr. Snow thanked the members for the compliment, and said he should always be pleased to do his best for them.

RESOLUTIONS.—The Secretary read the following resolution from the Liverpool Branch:—

> "That this meeting believes that ROUP should be scheduled, and the Council of the S.P.B.A. should bring the matter before the Ministry of Agriculture, and also no 'drastic measures' be brought forth, which will injure the Poultry Industry."

No seconder was found for the resolution. Members found difficulty in appreciating the exact meaning. The Secretary said he had no instructions.

B.W.D.—THE AGGLUTINATION TEST.

Mr. P. S. Campbell moved:

> "That all breeding stock on a farm which carries registered pens should have passed the Agglutination Test. The condition and time of testing to be settled by the Council of the S.P.B.A."

As a similar resolution was submitted by the Wadhurst Branch, it was agreed that the two should be taken as one.

Mr. Campbell said that they had been told that very little was known about the disease; with that he did not agree. He thought that the time had come when the Council should take the lead, and endeavour to combat the disease which was making such terrible ravages, and ruining many poultry-keepers. The test was reliable. It was true it would not clear out all carriers, but if the breeder has stock which is likely to disseminate disease, he should do his utmost to eliminate the carriers.

Mr. Marcus Slade spoke in support, and took the same view as Mr. Campbell. The breeder should do his utmost to eliminate carriers, even if it was agreed that the test was not wholly reliable.

Dr. Everard warned the meeting against acting hastily. He did not think the test was reliable enough to warrant their passing the resolution. He would certainly not regard it so unless birds were tested three times. There was plenty of evidence that birds which had not re-acted at the first test had done so a few weeks later, it might prove very misleading. Birds tested now, and entered as such in the Register, may be carriers when the breeding season arrived.

Major Few agreed that the test was not absolutely reliable, but he was inclined to support the resolution.

Mr. Brigden moved that it be referred to the Council, it was too big a question for them to come to a decision at a General Meeting.

Mr. Rosedale congratulated the Council on the fact that it had given members the option of registering their stock as blood-tested. It was true that only one member had taken advantage of the offer, but he hoped the S.P.B.A. would take the lead as it always had done. He supported the resolution on behalf of the Wadhurst Branch.

Mr. Everard moved that the Council be asked to appoint a sub-committee to investigate, with power to co-opt. This course was agreed upon.

WEIGHTS OF BIRDS.

Mr. W. H. Farnell moved :

> "That the weights of birds in the pens entered in the Annual Register shall be recorded as well as the number and size of egg, and the Council be instructed to draw up a standard for members' guidance. Birds below the minimum body weight suggested shall not be registered."

This was moved by the Secretary in the absence of Mr. Farnell, and seconded by Mr. Meekings. After a brief discussion it was carried unanimously.

Mr. Hemelryk's resolution proposing that the annual subscription should be increased to 10s.—five shillings of which should be allocated to the N.P.C.—was withdrawn, the proposer in a humorous speech admitting that the Council was "agin him."

The President then called on Mr. Edward Brown to address the meeting. Mr. Brown, who was given a very hearty reception, said it was always a real pleasure to him to attend their meeting because of the good spirit which prevailed. Their society was essentially a constructive society with a constructive policy. Look back over the years he was inclined to ask whither are we tending? What has the future in store for us? He was optimistic as to the future, but there was great need for the constructive spirit and the constructive mind. He thought they, as a Scientific Poultry Breeders' Association, might utter more effective warnings than they had in the past. There was no limitation to the word scientist, the humblest among them might be a scientist, contributing the result of his experience and observation. He wished to express his most grateful acknowledgment for the wonderful help given by the S.P.B.A. to the National Poultry Council. Had it not have been for their help the Council would have had considerable difficulty in carrying on. He mentioned that the N.P.C. had dealt with over 2,000 letters relating to Income Tax, Rating, and difficulties with local governing bodies alone. Mr. Brown then spoke of the World's Poultry Congress to be held at Ottawa in 1927. He appealed their support, not only did he ask for their financ support, but for the help of their knowledge. T chief topics for discussion would be : Breedir Marketing and Disease. Mr. Brown's speech w loudly applauded.

A vote of thanks to the President closed proceedings.

THE S.P.B.A. DINNER.

Fresh ground was broken on Wednesday even last, October 21st, when, in the King's Hall at Holborn Restaurant, the Scientific Poultry Breed Association held its first dinner.

Mrs. Charles Hunter, President of the Associat presided over a company of ninety-two members guests, and a very enjoyable evening was spent.

Among the guests were Mrs. Clay, Miss Malco Mrs. Pember, Mr. Edward Brown, Mr. Lawre Ardern (President of the Poultry Club), Profe Willard Thompson, Captain Doyle, Mr. Frank Sn den, Mr. and Mrs. Lewer ("Feathered World"), Broomhead ("Poultry"), Mr. House ("Pou World"), Mr. Mellor ("The Daily Mail), a represe tive of the "Daily News," and Mr. E. J. Davey.

It was the general opinion that an excellent m had been provided, that the service left nothing t desired, and that satisfactory arrangements had made for the comfort of the assembled company

The pleasure of the evening was greatly enhance the really excellent musical entertainment which given after dinner by well-known and highly-sk artists.

That clever light comedian, Mr. Jack Hellier, several very amusing songs, delighted the audi and caused much mirth.

Miss Helena Millais, a very versatile artiste, great pleasure and amusement not only in the s she sang with great effect, but also in the delight humorous stories she told. one American and the "Cockney," the beauty of both being that "accent" in both cases was so perfectly natural not in the least overdone.

Miss Kathleen James and Mr. Keith Mason syncopated duets in a very charming manner, their performance was much admired and gr appreciated.

Miss James also very kindly accompanied the s of Miss Millais and Mr. Jack Hellier.

In response to repeated applause all the art were very generous in acceding to the demands upon them.

Interspersed between the musical items was a toast list.

Mrs. Hunter called first upon Mr. Michael Ph to propose the health of "The Ladies," which h in a speech full of wit and humour, and woun by calling upon Mrs. Lewer to respond. This did with her usual charm. She was in good prac having fulfilled the same role the previous evenin

Ir. P. Hedworth Foulkes, with his customary skill ability, then proposed "The Visitors," coupling 1 the toast the name of Mr. Lawrence Ardern, the ly-elected President of the Poultry Club.

Ir. Ardern replied in a short pithy speech, in which expressed surprise that the honour of responding been thrust upon him, when Mr. Edward Brown, doyen of the Poultry Industry, was present. Mr. wn evidently did not agree with the suggestion, Mr. Ardern carried on.

he next toast was "The Press," proposed by Mr. tock Smith, who eulogised the work of the Press, the great help it always so willingly gave to anyg that could be published to benefit the Poultry ustry

he toast was responded to by Mr. House ("Poul- World "). Mr. Broomhead ("Poultry"), and Mr. lor ("Daily Mail").

lmost without exception throughout the evening e who were called upon to speak protested that had been cruelly treated and misled; as they e told there were to be no speeches! That certainly not fair to them, nor was it quite true. The ouncement said that there would be a very short t list, and those attending need not fear that would be bored by long speeches On this occasion ly no one could have been in the least wearied by flow of eloquence—all the speeches were to the t, and none of them long.

fact everything went with a swing. Mrs. Hunter t the ball rolling, and although songs and speeches wed one another rapidly, there was plenty of time conversing with friends between whiles.

n every hand one heard expressions of enjoyment, only of the dinner and the music, but of the eral atmosphere of cordiality and goodwill.

o much was this the case that it is hoped that an .B.A dinner will become an annual event and an itional pleasant feature of Dairy Show week.

APPLICANTS FOR MEMBERSHIP.

s, P. A., "The Dell," Priory Park, St. Albans.
ner, Charles H., Fields Farm, Heptonstall, near Hebden Bridge.
es, James W., Brook St. Dairy, Monifieth.
cher, W. W., 53, Grosvenor Road, Upper Belvedere, Kent.
ter, L. B, The Laynes P.F., Elham, Canterbury.
n, J., 60, Ash Street, Blackburn, Lancs.
erfield, E., Grange Lodge P.F., Sawley, near Derby.
ey, T. H., "Garthowen," Breaston, near Derby.
am, J., Casa Temple, Avondale Road, Fleet, Hants.
C. J., "Railway View," Stockbridge, Hants.
roft, H., Bar Green P.F., Stickney, Boston, Lincs.
s, C. H., 75, Highfield Road, Levenshulme, Manchester.
on, T., Station Road, Keele, Stoke-on-Trent.
den, R., Crabtree P.F., Cromwell Road, Fulwood, Preston, Lancs.
, E., Wistaria House, Somersham, St. Ives, Hunts.
, H., West Ville, Carrington, Boston, Lincs.
ck, G. M, Parsonage Farm, Upper Chute, near Andover.
e, Mrs. E., The Cottage, Charlwood, Surrey
ox, J, St. Clair, Southwell Park Road, Camberley, Surrey
yson, J., 69, Croft Street, Bonhill, Dumbartonshire.
, Miss E Frazer-, Mill House, Lenwade, Norwich.
J. Buttfield, Stock House Farm, Tolleshunt Knights, Tiptree, Essex
Jackson, W. H., Cross Road, Ferrybridge, Yorks
Pickles, J, Holling Hall, Denholme, Bradford.
Thomson, R. (junr.), Cherryhill P.F., Larkhall, Lanarkshire.
Patchett, Mrs., The Barn, Kinsham, near Tewkesbury.
Bielby, E. F., Green Lane, Walsoken, Wisbech.
Jeudwine, Mrs, Oakley Rectory, Basingstoke, Hants.
Doyle, Capt. J. E., Holland Hall, Whitestone, near Exeter.
Stansfield, R, 1, Blenheim Street, Birchcliffe, Hebden Bridge.
Bocking, G., Green Dragon, Fordham, Cambs.
Fry, M. Springfield, Milford-on-Sea, Hants.
Glover, J. F. C, Hewshott Grange, Liphook, Hants.
Smith, G. H., "Edwardstone," Farley Road, Sanderstead, Surrey.
Vilkitzy, B. A., "Domaine des Marronniers," Cambes (Gironde), France.
Mear, H., The Poultry Farm, Coyney Grove, Werrington, Stoke-on-Trent.
Graham, J J., 24, Prydes Place, Penicuik, Mid Lothian.
Cossens, Miss W., 7, Glebe Road, Prestbury, Glos.
Townsend, Miss N., Aerodrome P.F., Rendcombe, Glos.
McMahon, R., Little Silver, Marwood, Barnstaple, Devon.
Davy, P., Balcarras, Charlton Kings, Cheltenham
Middleton, G. B., Woodcock Hill, Berkhampstead, Herts.
Sutton, Miss D G, Grundisburgh Rectory, near Woodbridge, Suffolk
Dillon, Miss A, 7, Dyke Parade, Cork
Kruse, F. R., Earlesmere, Rosebury Avenue, South Shore, Blackpool.
Green, Mrs. J, Cottage Farm, Murrell Green, Winchfield, Hants.
McCreath, Mrs. E. M., Looseleigh, Crownhill, S. Devon.
Booth, R. T, The Old Rectory, near Fambridge, Chelmsford, Essex
Hermon, J. A., St. Helens, Stanted, Wrotham, Kent
Hoyle, Mrs. Z., Thatcham Grange, Newbury.
Nagle, R., Chelwood, Great Bookham, Surrey.
Cross, B E T, Oakdene P.F., Pulham St. Mary, Diss, Norfolk.
Lazenby, T W., Sandrary Farm, Woodbury, Exeter.
Russell, C. O., 1, Farrow Cottages, Mayford, near Woking.
Hughes, H B., Wistlers Wood, Woldingham, Surrey.
Hook, Lawrence, c/o Mrs. Massey, Dum Hills, Hoo Farm, Welwyn, Herts.
Brown, J. J., Rowney Green Farm, Alvechurch, Worcs.
Seager, L, Broomfield P.F, Yalding, near Maidstone.
Adkins, R. E. W., Valebrook, Ore, Sussex.
Wright, A. B., Lyfords Farm, Liphook, Sussex.
Smith, Mrs. F. H., Black Lane P.F., Gorefield, Wisbech.
Vass, L. W., Pulloxhill, Bedford.
Baker, C R., Larks Farm, New Road, S. Chingford.
Jenkins, R. F., 230, London Road, Romford, Essex.
Gradwell, R., Woodcote P.F., Blindley Heath, Lingfield, Surrey.
Stevens, C W., 163, Turnpike Lane, Hornsey, N.8.
Moore, F., 328, Whitehorse Road, Croydon.
Sasse, L., Ridgemont, Kenton Lane, Harrow Weald.
Lillie, C O., Winfield Egg Farm, Polegate, Sussex.
Garside, F., Honefields P.F., Wickford, Essex.
Munson, W R., Parsonage Farm, Sheerness, E. Kent.
Dockwray, Mrs. E. H., Paradise Farm, Chobham, Woking, Surrey.
Harris and Griffin, Messrs., Red House P.F., Doddinghurst, near Brentwood, Essex.
Cracknell, H. G., Kiln Road, Thundersley, Essex.
Murning, R., Windsor Villa, Beaumont, Jersey, C.I.
Shaw, A., Belle Vue, Golcar, near Huddersfield.
Whiteford, Mrs H. A., Hillhouse, Stewarton, Ayrshire.
Dewis, H., 5, Fern Street, Haworth, near Keighley.
Thatcher, Mrs. R. B., Burton Grange, Mere, Wilts.
Allen, W. C, "Harfield," Canewdon, Essex.
Anderson, P. D., 180, St. Leonards Road, East Sheen.
Gregory, J., 38, Hurst Street, Bury, Lancs.
Cavers, H., Gunthorpe, Notts
Woff, H, White House, Gunthorpe, Notts
Gill, S. H., Hazlemere, Adisham, near Canterbury.
Viccars H., High Street, Thrapston, Northants.
Hanson, W., 882, Manchester Road, Slattocks, Castleton Manchester.
Allcock, Mrs. F., Tenter Hill Close, Beardall Street, Hucknall, Notts.
Mellenfield, A. K., Elmstead, Burnt Ash Hill, Lee, S.E.12
Robinson, A., 274, Hednesford Road, Heath Hayes, Stafford.
Williams, A. M. Werrington Park, Launceston, Cornwall.
Salmon, J. W., 5, Woodhouse Hill Mount, Hunslet Carr, Leeds.
Carter, H., Drury Lodge Farm, Marlow Bottom, Marlow, Bucks.
Bray, F., Six Acres, Broughton Astley, near Leicester.
Bedford, G., Roydale, Earith, Hunts
Butcher, J. E., Lane End Cottage, Warmfield, near Wakefield, Yorks.
Peck J. J, "Goxhill House," Messingham Road, Ashby, Scunthorpe, Lincs.
Halliwell, J. and N., Messrs., Taylor's Lane P.F., Ainsworth, Bolton.
Toohill, T., "Killusty," Rolston Road, Hornsea, E. Yorks.
Lawton J F., Mulberries Farm, Nazeing, Essex.

The Dairy Show.

I was going to start this article with "Another Dairy Show has Come and Gone," but it occurred to me that was not very original, and might be a trifle obvious, anyhow it has come and gone, and my own impression is that a more optimistic feeling prevailed this year than last. The weather was bad, it usually is so, but no one seemed unduly depressed by it.

THE S.P.B.A. STAND attracted a larger number of visitors than any other in the Poultry Section. We had crowds round up all the time, and we had much there to interest and instruct. How they hung round that straw house, and questioned and criticised and criticised and questioned. Mr. Price was most helpful; his lucid explanation was listened to with the keenest interest ,and questions rained in on him. His replies were prompt and effective. Doubters there were—there will always be—we can't reconcile ourselves to this sort of thing after long years of houses built of more expensive material, and elaborate warnings against cheap houses, but after all there is common sense about this straw house. Moreover, there is actual practical experience, and you can't get over that. The question most generally asked: "What about insect life, red mite, etc?" I don't think there is greater danger than in the average wooden house, with its cracks and crevices, but it could be obviated if the straw were steeped in a 3 per cent. solution of copper sulphate. And rats and mice? Well, read the description of the house in the Dairy Show issue, and ask yourself if they are likely to be any greater trouble than in the ordinary wooden house. Then as to its length of life—well, that I cannot answer; but think of the low cost. I believe it has come to stay. We shall improve upon it as experience teaches us, those who so hastily condemn it should bide a wee.

The Food Purchase Scheme was the chief subject of interest. We had samples of mashes, meat and fish meals, locust fly meal, ground oats, alfalfa, etc., on view, comparison of our mashes with some of the much-advertised proprietary mash at more than double the price, was all in our favour, our quality being far superior. Many of our members who do not keep large numbers of birds complained that they were not able to take part in the scheme. It is very difficult to help them, and it would be much easier if they would but combine, but I have an idea in my mind, and, if it can be worked out, the difficulty may be overcome, but it will take some doing, and there must be the necessary organisation. It could only be applied to the mashes.

Major Hesketh's brooder attracted a lot of attention, as did the various models of houses, hoppers, trap-nests, etc., exhibited. There was a good demand for Mr. Wheeler's book, "Poultry and Fruit Growing." The Dairy Show issue of "Eggs" was unanimously voted the best we have yet produced—everybody was pleased. There is no doubt the S.P.B.A is "booming."

Turning to appliances, it is evident that makers a fully alive to the need for improvement There more originality of design, a greater attempt to mee the needs of the industry. It was a great show, an full of interest

A look round the Utility Classes indicates that exhibitors are certainly learning the art of putting a bir on the show bench.

I must confess to some disappointment in the Whit Leghorns As a class they were not good. Size wa deficient; they were lacking in tone, and some of th specimens that were exhibited, whatever they ma do in the way of production, would do infinite mischi as breeders. It is a point to which one may perhap be allowed to draw the attention of judges. The fin bone may be a characteristic of the layer, but lack bone should penalise, and heavily penalise, any bir which is exhibited at a Utility Show as a potenti breeder. We have so repeatedly had it rubbed i that these shows are educational, and that can neve be the case if cards are awarded to such tiny boneles specimens as we saw at the Dairy.

The First and "Special," although a nice enoug bird, was cut away too much in front

The Wyandottes were a good class. The Fir Prize winner was a specially good type, had plenty depth, and a nice head. The Second also was a ver nice bird; but the Third had a bad comb and lobe and was in poor condition.

The Black Leghorns were a really nice lot, and think the Light Sussex were the best lot that I hav seen in the Utility Classes at the Dairy Show. Th winner was a splendid all-round bird, although sh was a little white in lobe, but she won well, and wa a fine specimen of her breed.

R.I.Reds showed great improvement in colour, an no fault could be found with the award of first priz to the winner.

The second, although a nice bird, and of goo colour, will never make a layer She is evidentl going to size. The pullet with no card (No. 357 took my fancy very much, and she ran the first bir very close.

Australorps showed a wonderful improvement. Th first bird won well. The second had a poor head, an lacked vigour

In the "Any Other Variety Class" the first was wo by a very nice Buff Plymouth Rock.

In the Exchequer Leghorns Messrs. Joy and C won with a beautiful pullet of good coloured legs an very neat head, while Mr. Morris Hammond exhibited one of the nicest little Cuckoo Leghorns whic I have yet seen.

The Fancier has completed the wreck of th Orpington.

In a few years, unless a great effort is made to sav them and breed them to Utility Standard, they wi ke their place with the ancient varieties which are ily kept by the Hobbyist. It is a wonderful example how the folly of a few can destroy a beautiful and onomic breed.

The Bresse drew a very nice entry of thirty, and ere a very fine lot. They are rapidly increasing in pularity. Mrs. Piercy won well with a great team Blacks.

SIXTH MIDLAND LAYING TEST.

nal Report of Test. Twelfth Month ending October 4th (336 days).

The Sixth Midland Laying Test concluded the Twelve months Sunday, October 4th, closing what has been an interesting monstration of the powers of egg production of the stock, both large breeders and birds hatched and reared by Midland backarders.

A pen of W. Leghorns, the property of Mr. A. Pickard, hilvers Coton, Nuneaton, wins over all breeds with a total of 3 eggs (only 11 of which were second grade. value £9 1s. 4½d. e is closely recorded by Mr H. D. Phelan's (Northam, Devon) . Wyandottes with a total score of 847 eggs, value £9 0s. 1½d.; ird place being taken by another pen of W. Wyandottes, with score of 813 eggs, value £8 13s. 11½d.

There is an all-round uniformity of production, the leading x pens for the whole year ranging between 794 and 863 eggs.

Individual scores are well up, especially amongst W. Legorns, the bird taking first place with the score of 252 eggs, alue £2 12s 6½., being a W. Leghorn, the property of Mr. Will arron, of Bartle, Lancs., seconded by C. J. Ashton (Hathern), nother Leghorn having laid 249 eggs, value £2 12s. 4d, during e 336 days.

The total number of eggs laid by all breeds throughout the ear is 74,122 (only 1.52 per cent. of these being second grade). alue £659 11s. 4d.

The monthly production averages 6176.8 for the whole stock, e highest amount being 8913 during the month of April, and e lowest during the first month of the test, totalling 3903.

The death rate is low, being 3.25 per month through all reeds, chiefly from ovarian troubles

Throughout the year the health of the birds has been excelnt, no single case of serious disease being reported, owing, perаps, to the periodical dosing with internal antiseptic and tonic lution.

In the Single Bird Section the scores put up have been ccellent, Mr. Nicholls, of Alvechurch, Birmingham, W. Wyanotte, finally leading with a total of 219 eggs, value £2 7s. 9d., fter a sharp struggle with another W. Wyandotte, the property Mr F. A Ramm (Nuneaton), whose total was higher—223 ggs—but whose value only reached £2 7s. 0½d.

The average eggs laid per bird amounts to 153.14, value 1 7s. 3d. over all breeds, egg size throughout the year being ood. Very few birds have moulted, but those which have maintained steady egg production the while.

White Leghorns (five birds in each pen).—A. Pickard, Chilversoton, 863 eggs; Will Barron, Lancs., 860; C. J. Ashton, Hathern, 7.

White Wyandottes (five birds in each pen)—M. F. Phelan, ortham, Devon, 847; Misses Argyles, Alton, Hants, 813, Fowler ros., Earlswood, 794.

Rhode Island Reds (five birds in each pen).—L. A. Cooper, ootherlu. 771; K. A. Crawford, Oilham, Norwich, 745; Mrs. Atholtuart, Boxmoor, Herts, 726.

Light Sussex (five birds in each pen).—F. R. Welch, Bewdley, 4; Sezincote P.F., Morton-in-Marsh, 699; W. H. Brady, Penmaenawr, 703.

A.O.V. Light Breed (five birds in each pen).—E. Thomas, Sarоville, France (W. La. Br.), 696; G. H. Rogers, Grantham. .L.), 622; Blaksley and Blyth, Dorset (B.L.), 609; H W. Gee, ickey, Bromsgrove (Barn.), 620; J. Gordon Herbert, Newent, Glos. arn.), 589. F. R. Welch, Bewdley, 583.

Single Bird Section.—F. Nicholls, Alvechurch, 219; F. A. Ramm, uneaton, 223; J. Small, Edgbaston, 193

THE NORTHERN UTILITY POULTRY SOCIETY'S EGG-LAYING COMPETITION, 1924-25.

Twelfth Report, September 5th to October 2nd. 1925.

The weather has remained unsettled most of this month, but on the whole has been pleasant. The yield of eggs has gradually receded from the first day, when the number collected was 294 (the highest total), the lowest being 172, on the 29th September. Most of the leading pens remained in lay up to the end of the test, thereby making their position secure.

Mrs. Crooke's White Wyandottes, Pen 7, put up a total of 142, and thereby secured that honour in the Championship Section Mr. Metcalfe's Black Leghorns, who looked at one time like getting to the top of that section, all fell to moult, and lost the chance. In other sections the battle has been strenuous all the time. On the whole test a good general will result, helped largely by some splendid records of individuals. It appears to be practically impossible to select five tip-toppers in one lot

Health has been good; broodiness light, moulting very pronounced.

DUCK SECTION.

Twenty-one of these competitors have contributed eggs this month after moulting, every one of which has now fallen into a moult No. 3 laid 28 eggs, this pen laying 74 eggs for the last month, and winning this section for Mr Wilson Beattie. All are in good health.

EGG PRODUCTION OF LEADING PENS.

Figures are Eggs for the Twelfth Month and Total Eggs to date respectively.

Section No. 1. Championship (Ten Birds).—Mrs. Crookes (W.W.), 142, 1812, G. B. Metcalfe (B.L.), 80, 1746; Messrs. Longworth Bros. (W.L.), 58, 1687; Mrs. Canning Roberts (W.L.), 61, 1682; A. Snowden (W.L.), 122, 2077.

Section No. 2. White Leghorns.—Norman F. E. Kimberley, 69, 959; Wm McMahon, 52, 918; Richard Beesley, 42, 846; James A. Rigby, 61, 887; E. J. Stone, 57, 781; Albert Larder, 74, 775.

Section No. 3. White Wyandottes.—Robert P. Virtue, 93, 1023; Moorhouse Beaumont, 74, 814, Mrs. Alec Wilson, 59, 827; D. W. Gunston, 75, 800; J. E. Helms, 44, 920; Thomas Pinder, 30, 749

Section No. 4. Any Other Variety (Non-Sitting).—Mrs. J. H. Hill (B.L.), 69, 879; Ernest Jackson (B.L.), 29, 688; Philip K Berry (B.L.), 17, 608, M. Flaherty (A.), 53, 606

Section No. 5. Any Other Variety (Sitting).—Tom Gardner (R.I.R.), 69, 996; J. M. Thomas (R.I.R.), 48, 852; R. Duckworth (R.I.R.), 77 812; J. B. V. and W. Cummings (R.I.R.), 48, 811; Geo. W. Reeves (R.I.R.), 75, 777.

Section No. 6. Two Birds.—Bolton and Gardner (W.W.), 42, 438; Mrs. A. Stow (W.L.), 400; Henry Purves (W.L.), 31, 399; Lill and Clarke (W.L.), 29, 363; T. H. Barker and Son (B.R.), 14, 318.

Section No. 7. Single Bird.—E. J. Stone (W.L.), 19, 227; E. M. Saul (W.L.), 17, 222; R. K. Tallis (W.W.), 9, 215, Frank Heyworth (W.W.), 9, 212, Wm Edmondson (R.I.R.), 20, 195.

Section No. 8. Small Breeders.—Wm. Machin (W.L.), 74, 1040; T. Lindley (W.L.), 52, 878; E. M. Saul (W.L.), 34, 724; Eric Bernard Tingle (R.I.R.), 62, 795; Robert Ingham (W.L.), 45, 656.

Section No. 9. Cross-breds.—Wilson Beattie (B.L. x R.I.R.), 90, 1042.

Section 10. Ducks.—Wilson Beattie (K.-C.), 74, 872; Maunder and Colsom (K.-C.), —, 693; Chivers and Sons (K.-C.), 78, 668; Oscar C. Brown (K.-C.), —, 701.

Section No. 11. One Duck.—Arthur C. Marston (K.-C.), —, 174; Oscar C. Brown (K.-C.), 25, 195; Capt. P. C. Thompson (K.-C.), 25, 138; Mrs. E. M. Kirkley (W.R.), —, 103; A. D. and E. A. Wilkinson (K.-C.) 16, 101.

MIRFIELD AND DISTRICT POULTRY-KEEPERS' ASSOCIATION.

LAYING TRIALS. 1924/25.—Final Report.

September 27th closed the final period of the Test (48 weeks), only one pullet having laid over 20 eggs during the month. Three deaths have occurred during the month.

The leading pullet in the Test with the highest score is No. 111, score 270. bred and owned by Mr. P. Furness, also winner of the following awards:—

Diploma, best individual bird in the Test.

Silver Challenge Cup for laying the largest number of eggs.

Silver Spoon for the best individual R.I.R.

Silver Spoon for the best individual A.O.V. Heavy.

Silver Medal for the best member's bird at the close of the first sixth monthly period.

Silver Spoon for the best member's bird at the close of the ninth monthly period.

This bird has created a record over all other breeds during any test organised by the above Association

Pen 12, Buff Rocks, the property of Mr. W. Horsley, winners of the two-guinea sitting of eggs, Members' Cup for best pen Heavy Breed Section.

Pullet 130, White Leghorn, property of Mr. Blackburn, winner of Gold Medal, for the best individual bird (single) test; Members' Cup for best single bird, Light; Silver Spoon for the best White Leghorn.

Pen 6. White Wyandottes, property of Messrs Ledgard and Brown winners of Silver Fruit Dish.

Pullet 87, White Wyandotte, property of Mr. H. Poole, winner of Silver Spoon, for the best individual White Wyandotte.

Pullet 46. Black Leghorn, property of Davy and Son, Keighley, winner of Gold Medal, for highest score A.O.V. Light Breed, excluding White Leghorn, and Silver Spoon, for best individual A.O.V. Light: Silver Spoon for the best Black Leghorn.

Pullet 115, winner of 5s special, for the best Light Sussex, the property of Mr. T. E. Burnett.

Pullet 155, White Wyandotte, property of Mr. H. Crowther, Members' Cup for best Single Bird, Heavy.

Pen B., White Leghorns, the property of Mr. N. Firth, Members' Cup, for best Pen Light Breed Section.

The following is the final positions, the Gold, Silver and Bronze Medals are additional awards to the specials already mentioned:—

White Leghorn Pen (Three Birds).—Mr. N. Firth, 433 eggs (gold medal): Mr. A. V Erman, 400 (silver medal); Ledgard and Brown. 387 (bronze medal).

A.O.V. Light (Two Birds).—Davy and Sons, 261 (gold medal); Mr. H. Poole 239 (silver medal); Davy and Sons, 208 (bronze medal).

White Wyandottes (Three Birds).—Ledgard and Brown, 391 (gold medal); Mr. A. G. V. Ermen, 379 (silver medal); Mr. R Scott, 357 (bronze medal).

Any Other Variety, Heavy (Three Birds).—Mr. W Horsley, 512 (gold medal)· Mr. P. Furness, 499 (silver medal); Mr. T. E. Burnett, 371 (bronze medal).

White Leghorns (Single Bird).—Mr. A. Blackburn. 189 (gold medal); Mr. W. Horsley, 187 (silver medal); Ledgard and Brown, 187 (bronze medal).

Any Other Variety Light (Single Bird).—Sykes Bros., 136 (gold medal); Mr. F. Elmoar, 113 (silver medal); Ledgard and Brown, 101 (bronze medal).

White Wyandottes (Single Bird).—M. H. Crowther, 167 (gold medal); Mr C Whitley, 155 (silver medal); Mr. J. Rastrick 145 (bronze medal).

Any Other Variety (Single Bird, Heavy).—Mr. E. Saxton, 158 (gold medal); Mr T E. Burnett, 150 (silver medal); Mr W. Saxton. 140 (bronze medal).

Second Class Certificates.—No. 114, T. E. Burnett; No. 116, T. E Burnett; No. 132, Ledgard and Brown; No. 119, W. Horsley.

First Class Certificates.—No. 111, P. Furness; No. 113, T. E. Burnett, No. 117, W. Horsley; No. 126, W. Horsley; No. 130, A. Blackburn.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, OCTOBER 23rd, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in smaller supply, and, with an improved demand, is dearer at all markets, the average quotation for milling samples being 10s. 8d. per cwt., as against 10s. 5d. last week. Good quality samples of British malting barley are scarce, and at London have made 16s. 3d. to 18s. 9d. per cwt., while secondary samples are in abundant supply, but the average quotation is unchanged at about 12s. per cwt. Feeding barley and English oats mostly sell at late rates.

Imported wheat is sparingly offered for immediately delivery but trade is slow and prices in some instances are slightly lower on the week. Foreign feeding barley mostly sells at slightly easier prices, and imported oats, although not plentiful, realise less money, but at London recent rates are fully maintained Maize is cheaper at Bristol and Liverpool, and Argentine now averages 8s. 7d. per cwt.

Trade for bran and coarse middlings has varied at the different centres, and bran now averages £7 3s. and coarse middlings £8 17s. per ton. Barley meal and maize meal are cheaper at most markets, the former selling at an average price of £9 16s. and the latter at £9 17s. per ton. Linseed and cottonseed cakes have again declined in value.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull £7 2s; Liverpool, £7; London, £6 17s. Broad Bran: Bristol £6 17s; Hull, £8 9s; London, £8 5s. Middlings—Fine (Imported) London, £9 5s; Coarse (British): Bristol, £9 2s; Hull, £9 5s Liverpool, £8 15s; London, £8 5s. Pollards (Imported): Bristol £7 10s; Hull, £6 17s; London, £7 2s. Rice Bran: Bristol, £7 15s Liverpool, £7. MEAL.—Barley Meal: Bristol, £9 10s; Hull, £9 18s London, £10 Maize Meal: Bristol, £10 15s; Hull, £9 5s; Liverpool £9 10s; London, £10. Maize Meal (S. African): Bristol, £9 15s Hull, £8 10s, Liverpool, £9; London, £8 12s. Maize Germ Meal Hull, £9 10s; London, £9 10s. Maize Gluten Feed: Bristol, £11 7s London, £9 15s. Locust Bean Meal: Bristol, £10; Hull, £10 Liverpool, £9 5s; London, £9 12s. Bean Meal: Bristol, £13 15s Hull, £11 3s; London, £12 5s. Fish Meal: Bristol, £21; Hull £20 10s; Liverpool, £20 10s; London, £20 10s.

EGGS AND DEAD POULTRY.

British and best imported eggs are scarce and considerably dearer, but there is not much inquiry for the cheaper grades and some of these have declined in price. Nothing of interes is reported from the dead poultry markets, where prices are littl altered on the week.

Week-end Prices—Eggs (per 120): British, 27s 3d, 21s 3d; Irish 25s 9d. 24s 9d; Danish, 25s 3d, 24s 3d; Dutch, 26s 0d, 24s 3d Canadian, 19s 9d, 18s 0d: Belgian, 24s 0d, 23s 0d; Italian, 21s 9d 20s 9d; Argentine. 17s 6d, 16s 0d; Lithuanian, 17s 0d, 16s 0d Polish, 13s 6d, 13s 0d: Chinese, 14s 9d, 13s 6d; Russian, 15s 9d 14s 3d; Australian, 22s 0d, 21s 0d; Esthonian, 17s 0d, 14s 0d.

Dead Poultry (per lb.)· Fowls—Surrey, 1s 7d, 1s 3d; Irish 1s 1d, 11d; Others, 1s 3d, 1s 0d. Ducks, 1s 3d, 1s 0d. Geese 1s 1d, 10d.

EGGS.

Per Doz.—Ashford: First, 3s 1d; Second, 2s 10d. Birmingham First, 2s 9½d; Second, 2s 7½d. Bridgwater: First, 3s 2d; Second 2s 9d. Chelmsford: First, 3s 0d; Second, 2s. 8½d. Colchester: First 3s 0d; Second, 2s 3½d. Doncaster: First, 3s 2d; Second, 3s 0d Dorchester: First, 3s 2d; Second, 3s 1d. Exeter: First, 2s 10d reford: First, 2s 8d. King's Lynn: First, 2s 9d; Second, 2s 6d. ndilo: First, 3s 0d; Second, 2s 9d. Mold: First, 3s 0d; Second, 10d. Montgomery: First, 2s 10d. Newport (Mon.): First, 3s 0d; ond, 2s 9d. Norwich: First, 2s 9d, Second, 2s 5d. Oswestry: st, 3s 2d; Second, 3s 1d. Penzance: First, 2s 4d; Second, 2s 3d. fron Walden: First, 3s 1½d; Second, 2s 8½d. St. Ives (Hunts): st, 3s 1d; Second, 2s 11d. Salisbury: First, 2s 11d; Second, 9d. Skipton: First, 2s 9d. Truro: First, 2s 4d. Welshpool: st, 2s 9d; Second, 2s 6d. *Carlisle: First, 3s 0d. *Derby: First, 0d. *Ipswich: First, 3s 0d; Second, 2s 3d. *Lincoln: First, 9d. *Shrewsbury: First, 3s 2d; Second, 3s 0d. *York: First, 0d; Second, 2s 11d

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 9d. Doncaster: st, †4s 6d; Second, †4s 0d. Exeter: First, 1s 2d. Hereford: st, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 5d; Second, 1s 3d. wport (Mon.): First, 1s 6d; Second, 1s 2d. Truro: First, 1s 4d. lshpool: First, 1s 0d; Second, 10d. *Derby: First, †5s 0d; Second, 6d. *Ipswich: First, 1s 6d. *Lincoln: First, †5s 6d; Second, 6d. *Shrewsbury: First, 1s 5d; Second, 1s 2d. *York: First, 0d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: st, †5s 0d Second, †4s 6d. Exeter: First, 1s 2d. Hereford: First, 2d; Second, 1s 0d. Llandilo: First, 1s 5d; Second, 1s 3d. Welsh-l: First, 1s 0d; Second, 10d. *Derby: First, †4s 6d; Second, 6d. *Ipswich: First, 1s 4d. *Shrewsbury: First, 1s 5d; Second, 2d. *York: First, †5s 9d; Second, †5s 0d.

* At these markets the prices quoted are for sales by pro-ers direct to consumers. At other markets prices are those d to producers by retailers. † Per head.

BOARD OF AGRICULTURE FOR SCOTLAND.

EGG-LAYING TEST, 1924-25.

gg Production of Leading Pens at end of Twelfth Period—15th September, 1925.

Figures are Eggs and Points respectively.

Section 1. White Leghorns.—D. Baxter, Lanark, 1382, 1316; J. ntice, Uddingston, 1209, 1122; J. W. Dobbie, Rothesay, 1326, 1102.

Section 2. White Wyandottes.—R. A. Oliver. Boarhills, Fife, . 1166; S. E. S. Burnett, Colliston, Arbroath, 1034, 869.

Section 3. Rhode Island Reds.—Mrs. Logan, West Kilbride, , 1269; H. P. Roche, Stevenston, 1140, 1101.

Section 4 Non-Sitters other than White Leghorns.—R. Scott er, Uddingston, 1215, 1121; Jackson and Johnstone, Stonehouse, , 1101.

Section 5. Sitters other than in Sections 2 and 3.—J Adams, and, Lanarkshire, 1063, 1062; Mrs. I. Craig, Borlandhills, Dun-1051, 1051.

Section 6. Ducks.—H. S. Godsmark, Ashford, Kent, 1270, 1220; t. R. A. Long, Shefford, Beds., 1062, 1055.

MEMBERSHIP OF THE S.P.B.A.

o many of our readers are under the impression that they t necessarily be scientists, pedigree breeders, or farmers on a e scale to render themselves eligible for membership of the .B.A. This idea is quite incorrect. The S.P.B.A. is out to st all grades of poultry-keepers, from the proprietor of the 00-hen farm to the intensivist with his dozen or so birds; all entitled to equal benefits. The Five Shilling subscription gs with it many advantages, namely: Free Advice by Post, opy of the Annual Register, the Benefits of the Discount em, and many other advantages too numerous to mention . You should write for full particulars to the Secretary, NEWMAN, The Beeches, Rudgwick, Horsham, Sussex.

he Financial Year began on 1st September.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, October 28th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

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Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for every-one concerned.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

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EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN

(Founded in 1912 by RANDOLPH MEECH).

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" (Signed) J. C. F."

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EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association
WEDNESDAY, NOVEMBER 4th, 1925.

Editorial.

ONE THING AND ANOTHER.

Contained in the following letter is a problem hich is both interesting and puzzling. Perhaps our aders can help us to the solution. The letter is om the Secretary of the Liverpool Branch of the e S.P.B.A.:—

> "A member purchased last season a White Leghorn cockerel, the dam's record was given as 262, winter 62 2¼oz. eggs, which he mated to a pen of nine three-year-old hens, bought as five months pullets from the same breeder. (These hens have been kept intensively for two seasons, records over 200 eggs both seasons.) Guaranteed unrelated to the cockerel. Now the trouble is, that the pullets bred from the above mating, hatched January, February, and March, are only laying eggs about 1¼ oz. R.I. Red and White Wyandotte pullets, hatched about the same time, and fed simliarly to the Leghorns, are producing good marketable eggs. Purchasers of sittings from the above pen are also bringing their eggs to him, and asking him to account for the small eggs which they are getting from pullets hatched from his sittings. I have seen myself some of the eggs, and they look to me more like pigeons' eggs than hen eggs. He informs me that the hens from the pen lay 2¼ to 2½ oz. eggs, and have been large-egg layers both in their first and second years, which I should say clears the pen from suspicion. The cockerel is on the small size for a Leghorn, but very vigorous. Hatchability has been excellent, but the pullets take after the cockerel—on the small side. I advised him to wait until he saw the eggs the April-hatched birds laid."

The first inclination is to blame the breeder, t we must not be too hasty, and there are several ssible explanations. But for the fact that R.I. ds and Wyandottes reared in the same manner e laying marketable eggs, and that purchasers sittings have brought their eggs back to the ndor demanding an explanation, we might have ggested that the pullets had been either under- d or otherwise badly reared, or that they had en fed on an over-stimulating ration, but this ssibility is ruled out for the reason given. The next possibility is that the cockerel was really bred from a small-egg dam, and this we cannot lightly dismiss, **but** 1¼ oz. or pigeons' eggs from a White Leghorn!!! it is an extreme case, too extreme to admit the possibility of the small egg being inherited—that is to say, a 1¼ oz. egg, had it been merely a **small** egg, then we should have had no great difficulty, but might have definitely said that the male was bred from a small-egg dam. There are two outstanding facts, one is the wise advice of the Secretary to wait until the April-hatched pullets had laid, the other is the small size of the cockerel, and the fact that the pullets bred from this mating were small. In our view the explanation is, that the cockerel was a very precocious bird—that is to say, he developed very early sexually, and that he transmitted this early sexual development to his pullets, which were also small. They were not small because he was a small bird, if the dams were sizeable the pullets would have been of fair size had they not inherited the precocity of the male, coupled with the early hatching which generally results in an earlier maturity. As it is, they probably inherited high fecundity, and when starting laying laid at a rate which made such a demand on them that further bodily development was not possible, and as the reproductive organs develop with the body we get the small egg. We shall probably find that the April-hatched pullets will lay a larger egg than their earlier hatched sisters, but not such a large one as their dam's.

ANOTHER.

The writer says he has three 1924 White Wyandottes (cockerels). No. 1 is of average size, full of life and vigour, with tremendously developed wattles, neat comb, a real "warrior" head—the "boss bird" of three, but is rather "strawy" on back. No. 2 is rather small, and the writer does not like him, so he can be ruled out. No. 3 is the largest of the three, practically up to exhibition size, but of utility type, fair development of head points only, a more clumsy walk than number one, but is a grand snow white bird—just through the moult. Against these good points is the fact that when the three were mated to 50 pullets on the semi-intensive system; he was mortally afraid of the other two, but since they have been at liberty he has plucked up a bit. "Which of 1 and 3 would you keep to mate to a pen of ten?"

We are not told whether egg production is the object or not, but if such is the case we unhesitatingly plump for No. 1. The objections to No. 2 are, first, his size, for great size is correlated with late maturity, and late maturity with low fecundity; secondly, it most frequently happens that a cowardly bird is not well developed sexually; thirdly, the clumsy walk suggests that the bird would not fertilise the eggs well.

The second question from our correspondent relates to a White Leghorn cockerel, with black ticking in the neck hackle. When he was younger they showed up more plainly than now. He is a splendid bird in other respects. If he is used in the breeding pen, will the progeny show the same fault? The answer is YES. In the case of the majority of his mates the trouble will not arise, and the white will be dominant to the black, but in the case of others who carry black pigment as a recessive, a percentage of the progeny will be ticked with black.

The third question is:—The writer has trapped for winter records only for the last two seasons White Leghorns, and he has found that those with records below 40 have been laying much larger eggs than the others—for the last three or four months would say they have averaged quite 2¼ ozs., the others a bare 2 ozs. As he will be short of breeders next spring, had he better breed from the best of the under 40 lot, or the best of his 1925 pullets?

We may take it that this is a case where a wide discretion should be used. It is not a case of inherited small egg, but rather one small egg caused by precocity. We should be inclined to mate the pullets which exceeded the 40-egg winter record to the son of a a hen laying an egg of not less than 2¼ oz. weight. He should be a well-developed bird with plenty of bone; and may we here remark, that a bird may have plenty of bone without being coarse, a fact which is not always recognised. It would be inadvisable to breed from those with records of under 40; the 1925 pullets would be preferable if careful selection of well-developed birds was made.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year began on 1st September.

A Year on a Poultry Farm.

By **Lieut.-Colonel J. MACRORY, D.S.O.**

CHAPTER II.

We left the top sections of the first two Doubl
Gloucesters attempting to hatch every hatchabl
egg. (I must again remind you that the Doubl
Gloucester is **not** a cheese, whenever it is men
tioned in this veracious account. The only re
semblance it might possibly have to that edible i
its smell just after a hatch.)

New readers must understand that I am th
fortunate possessor of four Double Gloucesters
each holding, roughly, five hundred eggs in it
two compartments. The general scheme of hatch
ing adopted here was to bring forth a potential fiv
hundred chicks each week—preferably on Sundays
on the principle that the better the day the bette
the deed. I am not sure that the chickens hav
justified their religious start in life. (Sometime
I think that nothing would make a chicken reall
religious.) This scheme, which sounds so simpl
really involves very high mathematics to work
out in practice, owing to the fact that you hav
to start the incubators in pairs, and transfer th
eggs from the top compartments to the botto
ones on the eleventh day after starting. To pr
pare the chart is really almost as interesting
solving a crossword puzzle.

In any case, I started up my first two Doub
Gloucesters, having hung them round with my jar
jars full of water with wicks leading into the h
air chamber. I should like to digress a little
this point in order to go fully into the matter
these wicks. It may seem quite simple to stick
old thing into a jar of water, and expect it
draw the moisture up. As a matter of fact, ev
this question of the wicks required years of
search to find a satisfactory answer. I tried silk
cords, having observed that my Hygrometers us
silk wicks. They proved of little use in practic
I tried tow, I tried strips of linen, I tried blottin
paper (it was the **best** blotting-paper, too, like t
March Hare's butter); I tried every sort of thi
known to science, and they all failed me. At la
I found the perfect medium, and since I found
the members of this household have gone ab
the house girt about their middles with bootlac
and scraps of rope ferreted from the outhous
The perfect medium is, in fact, pyjama girdl
Scientifically I will not attempt to explain th
but practically I know it works. One ordina
member of an ordinary household should be a
to furnish wicks sufficient for one Double Glouces
incubator. If you still persist in wearing the o
fashioned nightshirt, I fear you will never be a

hatch every hatchable egg (it will take you all ur time to do this even if you wear pyjamas).

After this small and comparatively unimportant ression, let us, if you please, return to our ubators.

The Double Gloucester is a very peculiar machine some ways ; it is also a very excellent machine. e top portion is a hot-water incubator, but it practically no ventilation. The eggs remain the first eleven days of their existence—**has** egg an existence, by the way,—in a warm stag- nt atmosphere? This is, I believe, very good them at this stage. They don't **want** fresh air exercise, they simply want a nice placid, tem- ate twilight slumber, which they certainly get hat top drawer. I have found, in addition, that y get practically the ideal amount of moisture he top compartment. Once they move to the er compartment, however, they get plenty of h air and sanitation—and they **don't** like it, ss you give them plenty of moisture, too. You hardly give them too much moisture, the egg n incipient drunkard in this respect. Even pyjama cords cannot deliver the goods in this ect, and, as for the little moisture trays sup- d with the machines, the hygrometers laugh n to scorn. Having discovered that I was deal- with a really thirsty article, I began to satisfy craving in every possible way. I fairly flooded e eggs with water twice daily, and I supplied n with wet mattresses of sacking spread on of the nursery trays. I have had a hatch of ly 90 per cent. in two of my large Gloucesters means of these heroic measures, and when I refrained from this (apparently) excessive stening, I have had hatches of as low as 20 per So that I am nowadays all out for water— r, water everywhere, and not a drop to drink ; it all to the eggs and find something else to yourself.

here is another point about this incubation tening question, and that is, that, in my ex- nce, the chicks that are hatched **in a really t atmosphere,** are always much bigger, er, and contented-looking than those which are ged into existence under drier conditions. is perfectly natural, so I need not digress to explain the reason.

thout going into exact details and figures of ncubation, I may tell you in confidence that he last three years I have annually consigned t 6,000 eggs of very excellent calibre to the of my four Double Gloucesters, and that I annually hatched a shade over 3,000 chicks. e fond of mathematics can work out my per- ge of hatching from the above figures, others ass on with me to brighter subjects.

ave lately been informed (in "Eggs") that ursery tray in hot-air incubators is a veritable death-trap on account of the great difference in temperature between it and the egg tray. I do not, however, think that this argument is sound. It might be if the chicks were going to spend the whole of their existence wallowing among the debris of the egg tray, but, seeing that they have to leave the incubator altogether very soon and face the cold, cold world on their journey to their brooder, I have come to the conclusion that once the chick is out of the egg a very large proportion of its troubles are over. It can, in my opinion, face quite a lot of temperature changes. After all, it has to live in a brooder with an average temperature of under 90 degrees, and the temperature of the nursery drawer is nearly always greater than that, so I hardly think that much harm can accrue to the chick from its first fall in the world.

In any case I like the nursery drawer, for it saves me a whole lot of labour when the moment of transferring arrives. I simply lure all chicks worthy of the name forward from the egg drawer to their fall, and having got the nursery drawer as full as possible I spread a blanket on the ground (I always use my youngest daughter's blanket, because she is reasonable about such things, and I am not quite so sure of Mrs. Macrory's views), withdraw the nursery drawer gently but firmly, decapitating as few chicks as possible in the operation, place it in the centre of my youngest daughter's blanket, wrap it smartly up in the latter, place the whole bag of tricks under my arm, and walk off proudly to the brooder house (accompanied by derisive cries from the family of "Bring out your dead"—my family have a perverted sense of humour), where I count the spoil as I dump it under the hot-water pipes.

We decided long ago that it was breaking the rules to count chickens with bandy legs, chickens with twisted necks, chickens with egg shells and yolks hanging around them, chickens with four legs and two heads, and such like curiosities of nature and incubation. We give these away to our friends and only count in the averages such as look as though, given reasonable care, they might become useful and creditable members of society.

We may be poor, but we are honest. You will hear of no 100 per cent. hatches from the Ardmore Poultry Farm, nor of every hatchable egg being hatched. Such things MAY happen—but not here.

But isn't this chapter about long enough? The chickens are up under the brooder, the unhatchable and C3 individuals have departed, via the river, for that bourne from which no traveller returns, and what more do you want?

There is no room in this issue of "Eggs" for another digression on my part, but there are lots of other digressions coming in future issues.

Let's wait in patience for them.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death. marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns. except in relation to Post-Mortem Examinations.

C. C. (Nairn) sends samples of thirds at 13s. 6d. cwt., and bran at 11s. The bran is a poor sample, and dear at the money, and the thirds, although of good quality, are at least 1s. per cwt. too dear; but as I understand this is owing, in a great measure, to carriage, this comment must be modified. Considering the quality of the ingredients, I do not think the mash supplied is good enough. This is made up of: 3 lbs. bran, one fish or meat meal, 2 hashed oats and one of alfalfa meal. The bran should be omitted entirely, and in place of this 4 lbs. of the thirds should be used. I think "C. C." should join the S.P.B.A. and buy the mashes ready mixed in larger quantities. The prices she is paying are so high that she really would be much wiser to buy through the Association, as we could put on rail at a very much lower price than she can buy.

"Novice" (Lincs.) sends me a sample of what he describes as a "sample of fish meal, advertised as 'prepared fish meal,' and sold in the bags of a proprietary firm." The price is 26s. per cwt., and the firm state that it contains 5 per cent. oil and 40 per cent. albuminoids. 'Novice" had not fed fish meal previously, but since giving rather less than 10 per cent. in the mash the droppings have been very mustard-coloured and loose, and the older birds have produced less eggs, and he has been giving the fish meal for a month.—It is a very inferior sample, probably made from the refuse from the London fish markets; dark in colour. It is deficient in lime phosphates, and would not be worth more than half the price. There is no doubt this fish meal is upsetting the birds, and it would be wise if he scrapped it immediately. His feeding in other respects is quite satisfactory. There would be no harm in his mixing the mash with ho water over night, and drying off with half sharps in the morning. No, I think two vigorous cockerels (White Leghorns) would hardly be sufficient to run with 60 Light Sussex and White Leghorn hens next spring. In spite of isolated cases, where goo fertility has been obtained, I think he should ru four cockerels with the 60 birds.

J. K. (Stirling) writes to ask the approximat cost of hatching and rearing turkeys for nin months, from April to December, and average pric when sold. (2) If free range is not available, ho many could he run per acre provided two or thre cabbages were given daily so as to supply th necessary green food? (3) Is there any prob ability of disease being carried by turkeys tha infect hens? He finds "Eggs" very interestin and helpful.—In reply to his first query, no figure are available, but a cockerel of good weight an well developed would probably cost £1 for foo The higher the weight the greater the cost o each additional pound of flesh. Cost depends o quality and markets. The average price would b anything from 2s. to 2s. 10d. per lb. It woul be most unwise to attempt rearing except on fre range, as turkeys foul land very quickly. I answer to his third query: there would be dang of coccidiosis and gapes. The turkey is the ho of the gape worm. From my correspondent's lett I gather that he is not in a position to keep turke profitable.

(Scotland.) In answer to another question fro Scotland as to whether I have proved that turke sitting upon trees at nights do better than wh housed, they are far better when allowed to per out.

L. N. D. (Norfolk) sends post-mortem report a bird which was said to have died from go caused by the excessive feeding of animal prote My correspondent sends an account of his feedin and in answer to his letter I state, most emphat ally, that the bird did **not** die from an excess animal protein, as the total amount was less th five per cent. of the total ration. I think it sho be recognised that there are individuals in eve flock of birds with a tendency to some disease other, just as is the case with humanity. Thus get post-mortem reports stating that a hen h died from fatty degeneration, and advising twen four hours' starvation, and a dose of Glauber sal th the result that half the flock are sent into a ult, or there is a very big drop in egg production. these facts should be taken into consideration, d the flock should never be treated for the in- idual. When such a report is received the eeder should consider the whole of the flock. If health of these is satisfactory, and in the case ere fatty degeneration and a recommendation th it has been received, and the flock are putting good records, he may be sure it is most unlikely at he is over-feeding. "L. N. D." wishes to ow whether he can cross his Cam Leghorns with cockerel from another strain. This will be all ht, provided that the dam's record is satis- ctory—that is to say, that the winter record good, size of egg satisfactory, the record for e year good, and the bird laid late into the tumn.

G. A. F. (Stockport) has nine chickens which e now eight weeks old, six Light Sussex and ree crosses, and he wants these to be ready for ling at Christmas, and he asks advice as to ding. At present they want to be developed ther than fattened, and I would suggest that he es them each day a scalded mash of :—Sussex ound oats and biscuit meal one part each, mid- ngs four parts, meat meal half part, dried off th bran. These parts are by weight. In addition this a good feed would be to get some good mp white oats, cover with cold water, and allow simmer on the fire until all the water is absorbed d then fed in troughs. Fattening should begin ee weeks before killing. A mash made up of e part each barley meal and Sussex ground oats, d two parts middlings, mixed to a crumbly moist nsistency with sour skimmed milk. This should given twice daily. A cheaper mash would be :— ce and cooked potatoes one part each, three rts middlings, quarter part meat meal. As he ends to kill all the birds, it is hardly necessary separate the sexes. His next question is that has a R.I. Red utility pullet of excellent colour d type, but her ear lobes are streaked with ite. Is she fit for showing in a utility class? e would not have much chance in the utility ss with such a defect as that, unless it is a ry small local show. He has four 1925 Leghorn llets in a shed 6 ft. x 4 ft. x 5 ft. x 4 ft. ; will ey need a run, or will they be all right without e? No, the quarters are too cramped. They uld need a run. The shed would be all right for birds to perch in, but a covered run would be great advantage where they might scratch. A al poultry farmer tells him that birds kept com- rcially, and dry mash fed, in flocks of 150, uld give 15s. net profit per bird per year. Is s correct? No, "G. A. F.," your local poultry mer talks like a fool. If such a profit was ssible, I should be keeping five thousand laying pullets in flocks of 150 at this time. All my correspondent's birds are on earth runs, wet mash fed, and confined in bad weather. Will they benefit by an allowance of cut green bone daily? No, not if he is feeding animal protein in the mash: but he could give the cut green bone in place of the fish meal or meat meal, whichever he is using, giving the birds half an ounce per bird per day. "Is my mash suitable for bantams kept for egg production, practically on free range?" Yes. He has a utility Sussex pullet which "is true to type, good markings, handles beautifully, but her breast bone terminates as a knob (see sketch), is she suitable for showing?" I am afraid I do not quite understand the sketch. There seems to be some deformity. "G. A. F." adds: "It would interest you to know that my hens fed on your formulae have laid better than ever, and my chicks reared on your mashes have grown splendidly." Following up this he says that 15s. profit was got on two years' working. The second-year birds were used for breeding, giving a net profit of £1 10s. in two years. Now, "G. A. F.," you are young; just try and use a little common sense, and do a little mental arithmetic, and see how far this is possible.

S. H. P (Lurgan) is a poultry fancier, and is glad to see what work the English Fanciers are doing in regard to the marking of foreign eggs. He has 120 hens and 30 pullets. More than half of these are White Wyandottes, and the remainder R.I Reds, Light Sussex and Leghorns—two and three-year olds. The highest number of eggs he got this year from the lot was 30 dozen in April. They commenced to lay in July, and are over it now, but he is only averaging one dozen per day now. The house is 50ft. long and 14ft. wide, 12ft to 14ft high, with a concrete floor. The fowls have half-an-acre of land, and have access to a little grass. They get oats, wheat and cracked Indian corn on alternate mornings, and a soft mash at four o'clock, which is a poultry mixture advised locally.—My opinion is that S. H. P. would be wiser if he were to get rid of a lot of his old stock. I cannot form any opinion of the poultry mixture which he is using, but I believe the real fault is with the stock, and he is not likely to get many eggs this winter with two and three-year old birds. However, I do not believe in pullets going to perch at this time of the year on a soft mash, fed at four o'clock. He would be wiser to give them the following mash in the morning (if he prefers wet mash):—1lb. bran, 5lbs. middlings, 1lb. Sussex ground oats, 1lb. Indian meal, and 1lb. meat and bone meal or fish meal. About 2½ozs. of this weighed before scalding, but the actual quantity must be a matter of observation; and as the last feed he should give three parts wheat, and one kibbled maize. If he had not so many old birds I should have recommended more kibbled maize.

R. D. B. (Churchill) wants advice on incubation. His incubators are Glevum 150-egg hot-air machines. His first point is the difference in temperature between the nursery drawer and that of the egg chamber, which we know to be about 20 degrees. He proposes to extend the egg tray up to the front of the nursery drawer, where the side is left for the chicks to fall down, and to make a small frame of wood and wire netting to fit on to the end of the egg tray, at the far end, and adjust this on the 19th day, when the chicks begin to fall over. He wants to know whether there is likely to be any damage done in keeping the chicks in the egg tray until the hatch is complete. Would the chicks already hatched be likely to do any harm to those hatching by continually walking about on them? Of course in natural hatching this takes place, and it does not generally have any ill-effect. Would it be detrimental to the already hatched chicks to stay in a temperature of 103 to 104 degrees for 24 hours or so until hatching is completed? Do I think it is a good plan to hang a curtain over the door of the incubator during hatching, so as to keep the inside dark, and keep the chicks quiet, and prevent them from crowding up to the front?—In answer to his question: (1) The idea of extending the egg tray as my correspondent suggests, is quite a sound one. (2) No great harm is likely to arise to those hatching by those already hatched continually walking about on them, but in any case it would be advisable to darken the glass front of the incubator. In my opinion a great deal of mischief is done by the glass front of an incubator, because a newly-hatched chick is naturally exhausted in the process of hatching, and requires rest and quiet. Some experiments which have already been made demonstrate this. There would be mischief done in leaving them until the hatch is complete at a temperature of 103 and 104 degrees; not so much from the temperature of the incubator, but because of the rapid increase in the carbon dioxide on the incubator tray. One often sees chicks panting from this cause, and they, therefore, should be removed. I have already stated that I believe it to be an excellent plan to put a curtain over the glass door of an incubator during hatching.

F. P. (Glais) writes and wishes to know concerning fowls with excreta adhering behind, yellow in colour, also of a most unpleasant odour and cheesy. Would I advise breeding from any fowls that are inclined that way, and is it in any way related to B.W.B.?—F. P. should remove these birds at once from the pen. I am inclined to think that the trouble is due to Cloacitis-vent gleet. It is highly contagious. The feathers should be cut away, and the part dressed with a solution of Izal (one part in 300 of water). Then it would be necessary to syringe this into the vent, using a weaker solution (one part in 500). Two teaspoonfuls of sweet oil daily would be helpful. The disease is not in any way connected with B.W.D.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

A CANDID OPINION.

So many people ask me to give a "**candid**
opinion, maybe on a sample of food, or
appliance, remedy, mating, etc. What go
would my opinion be if it were not a candid on
It is very nice to be told what you would like
be told rather than what you ought to be told,
it is rather pleasant than helpful. When a m
sends you a sample of mouldy food, and tells y
that he has two or three cwt. in stock, and wou
like your **candid** opinion as to whether he shou
scrap it or not, and that word candid is heav
emphasised, you know jolly well that in his he
he is hoping you will say it is all right, he can
it, and he is almost trying to persuade you to
so. However, to get on. The following is
extract from a letter received:—

> "I want your candid opinion of ——————. Do
> know what they are talking about, or are they just qua
> You see I had one flock of young pullets attacked
> Coccidiosis; never had such a thing before, and never
> it again, so am trying to find a real preventive if they is
> a thing, which I begin to doubt. Now, x x x x tells
> that it is my feeding that was the sole cause, and that
> is no need to fear infection of the land, which, in spite
> what he says, I certainly do not intend to use again for a
> or two. Now to me such a statement appears silly to say
> least; but he was rather certain about it, and said for a
> he could wipe the chance of such a thing right off the fa
> Another thing he said, don't feed buttermilk or milk of
> sort, or you are out for trouble. I say it is the other
> about, am I right?"

One has only to read the advertisement of
people in question to know that they are quac
They savour of the old days when the quacks s
the elixir of life at the country fairs to the gap
yokels for sixpence a bottle. It is astound
that in these times they can appeal to anyo
The writers of advertisements, however, appear
have a better knowledge of humanity than
disease. The statement that coccidiosis is
to the feeding is, of course, absolute nonsen
My correspondent was wise not to pay the fee,
he is very wise not to attempt to rear chicks
the same land for a year or two. As to w
these people have to say of milk and butterm
that is utter nonsense. We have demonstrated
value of milk too often to pay any attention to
ignorant vaporings of a man in search of a
Returning to the question of coccidiosis, I vent
to suggest that sulphate of iron in the drink
water might be worth trying as a preventive af
the first week. This should be given for a f

ight, and then discontinued for a week. There re sound reasons for this suggestion, which I ill not mention at present, but the iron is not ecommended in this case as a tonic, although it ill have that effect.

AND THE TEXT WAS :—

> " All cockerel pens are sent out on a clear guarantee of tisfaction or money back. You run no risk if you deal with x x x x . Don't buy a house just from a well got up cture; be sure you get complete specification."

The picture was very well got up, now we come the story. A. ——— sends for one of these ockerel pens. He is not at all satisfied with it, e work was rough, the boards thin and leaky. complains, and in reply receives the following tter :—

> " We thank you for your letter to hand this morning, but e must explain that the cockerel pen was built from exactly e same boards as we use in all our houses, and these are aranteed 5/8 inch tongued and grooved, but when they go rough the planing machine naturally they lose 1/8 inch in ickness.
>
> For the price charged we are sure that it is very good value, d we think it will prove satisfactory for your high-grade stock. We shall be glad if you will give it a trial."

This was not satisfactory, and A. writes that e proposes returning the house. The reply is as llows :—

> " With reference to your letter to hand this evening. Now you decide to return the cockerel pen, all carriage must be id, **as you have no real reason why you should return it.** We e sure it is very good value for money, and we think you are aking a big mistake in returning same.
>
> We hope you will reconsider your decision, as you will find carriage charges very expensive."

Now you see it is not a question of the buyer eing satisfied with his purchase, but of the vendor eing satisfied with what he has sold. That is the tle snag in the catalogue, and your interpretation the text may not be the correct one. The oral (I am not preaching the sermon, only deicing the moral) : Buy your houses through the P.B.A. They have plenty of reputable firms on eir list.

Another little trick at the Dairy Show was a use advertised at £3 12s. Very nice—perches, st boxes, droppings boards, floors, etc., all ted, but if you bought the house under the imession that the price was inclusive, as, of course, e majority of people did, you were doomed to sappointment, for you only got the shell. All e little items mentioned above come under the rm " extras."

FOOD PURCHASE SCHEME.

In accordance with the promise given at the iry Show, I hope next week, and in future, to blish weekly the prices of foodstuffs. Gradually are rubbing the rough edges off the scheme, d I hope we shall be able to announce important improvements in a short time. But please remember that the scheme is a new and original one, and requires a good deal of thinking over and some careful negotiations. Many members send us the names of firms, with whom we find it impossible to do business, and are a little disgruntled because we do not take them up ; but, you see, when we start negotiating with these firms they tell us a little more than the member who happens to be their customer.

(Continued at Foot of Next Column).

Houses and Hovers at the Dairy Show, 1925.

By **P. S. CAMPEELL.**

The reason why the house and the hover are taken together in this article is because, in the main, they perform the same functions, and should be designed on the same principles.

The house is employed to protect and shelter adult stock. The hover to do the same thing for chicks, with the addition of having to supply artificial heat.

Anyone going to the Show expecting to see novel ideas and variation in designs were doomed to disappointment. After reading all the articles and correspondence on houses, and the true principles of ventilation that have appeared during the last year, they might reasonably have expected some changes

There was only one house in the whole show that was constructed on proper lines, and that was an " Apex " house. There was plenty of scope for automatic ventilating fittings in the span-roof type, but none were to be seen.

If no attempt at improvement is ever to be made, the appliance makers as a whole would save a great deal of money by storing their houses in London for succeeding shows.

The only relief from the boredom of inspecting houses of a monotonous and out-of-date type was a discussion with the makers as to the reason of this absolute standstill. Their reasons were varied and interesting.

The makers, of course, blamed the public. Most of them agreed that the majority of their customers were people who were either incapable of making their own, or of devising plans and having them constructed locally. The makers, with very few exceptions, were just as ignorant of the principles of ventilation as the majority of the public. Some of them knew absolutely nothing at all about it, and thought that a window anywhere would do. Others complained that customers " wanted this and that done," but did not understand what special fittings were for. It is the duty in these cases for the makers to instruct and educate their prospective customers.

They would learn a very good lesson on how to progress in their industry if they paid a visit to the Motor Show. Any new fitting on a car that is scientifically sound is very soon explained to the public. They are told why it has been fitted, and why it is a necessity. But it must be remembered that, in the first place, the motor salesmen of to-day knows the scientific and practical side of their profession. The majority of the appliance makers only know the practical. There was no fault to be found in the actual workmanship of the houses.

With regard to the price. It is impossible to express an opinion; the public and the makers will never see eye to eye on that point.

The hovers were rather more interesting, not because their principle of construction was any better, but because of their variation in design. In most cases an induced current was an absolute impossibility. Plenty of heat could be applied but no circulation of air. Some had advantages that others had not, but there was not a single one, in my opinion, that anywhere approached the perfect appliance that the designer claimed it to be.

Some of them had flat tops. Now how on earth can foul air escape out of a hover with a flat top, even though it has an aperture round the edge? A great many relied on the intake of air in a lateral direction. I suppose under these conditions the chicks in the fog in the centre have a more comfortable night than their companions in the outer ring; neither have an enviable time.

Apart from the ventilating system in most of these hovers, the chief drawback is the material employed for their construction. A splendid conductor like galvanised iron cannot possibly fail to lose or gain heat with an alteration of the external temperatures.

The education of the poultry industry in the matter of ventilation is now as urgent as their education in the matter of feeding was a few years ago.

The S.P.B.A. are again to the fore with the splendid article in the "Dairy Show" number of "Eggs." Applied Ventilation is an interesting subject for the long winter evenings.

Correspondence.

VENTILATION.

To the Editor of "Eggs."

Dear Sir,—I have read the six pages of Mr Somerville's article on Ventilation in the curren issue of "Eggs," and I think I have read th whole of his previous communications on this sub ject, but I must confess that they leave m where I was before I read them. They are in teresting expositions of the theory of the subject and recapitulate knowledge that is in the possessio of the most intelligent men, but of what practica value are they? Some of his arguments in favou of the apex type of house are very much open t question, and on another occasion I will attemp to deal with them. For the moment I will suppos that the whole of his conclusions are correct, an that we desire to put them into practice. How ar we to do it? How many of your readers ca construct a ridge ventilator that will always ac as an **outlet** and never become an inlet? Althoug I have spent much time and money on experiment houses I cannot do it, and have never yet see it done. Mr. Somerville's system hangs entirel on this, but it is the one point on which he i silent. I submit to you, Sir, that one single colum on this matter would be of more value to yo readers than reams of anything else, and, if M Somerville has solved this problem, now is hi opportunity to perform a service to the industr of incalculable value, by telling us how to preven an **outlet** becoming an **inlet** under varying co ditions?

Incidentally, if Mr. Somerville wishes to explo the matter commercially, I think many of us woul willingly pay for the necessary plans and informa tion if results are guaranteed by him.

Yours faithfully,
TOM CARTER.

THE MARKETING OF ENGLISH EGGS.

To the Editor of "Eggs."

Dear Sir,—Being much interested in Mr. W B. Morris Hammond's article on this subject an with his concluding words, "don't let this pas without **doing** something," may I say I think th solution is in marking the address of the far with new-laid on **every** egg sent out, whether t the retailer, who may, and often does, mix the with other eggs—or to the consumer.

I am in quite a small way, but there is a heav demand for my eggs, and the only complaint I hav

(Continued at Foot of Previous Column).

ever had was the eggs were too big for the egg-cups! As to grading, folk will **not** pay more for a 2½ or 2¾ oz. egg, but I put every egg on the weighing board, and if they don't all bump down at 1¾, as pullets' first efforts sometimes will not, they go out as egglets at a much reduced rate, and are eagerly sought after.

Every egg is spotlessly clean and absolutely new-laid, and a basket of them, covered with white tissue paper, is a goodly sight.

Let us mark all our eggs and help our standard high, there is a tremendous demand for the best.

A. MABEL PIERCE.

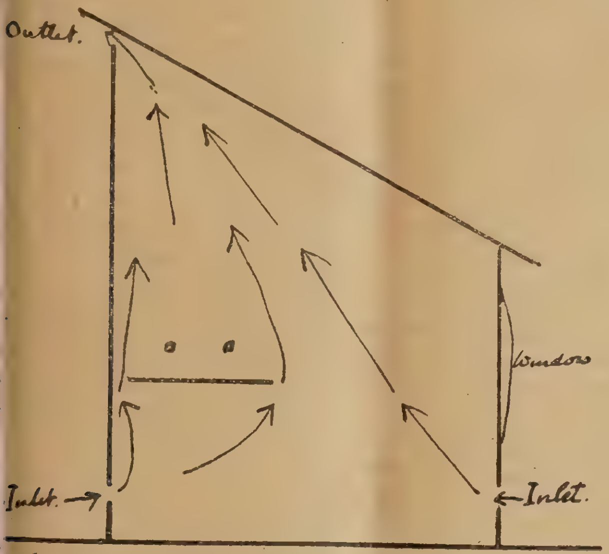
VENTILATION.

To the Editor of "Eggs."

Dear Sir,—I should like to voice my appreciation Mr. C. Winthrope Somerville's articles on ntilation, which are most helpful.

Would it be asking too much for him to give us detailed description of the construction of the et and outlet used in his induction system?

In his article in "Eggs," October 21st, 1925, ge 264, column 2, sub-head "Structural De-n," he states that he knows of no way in which system can be applied to the "lean-to"-type house. I write in ignorance and humility, but has occurred to me that it might be used by ersing this type back to front. By having the ches in the highest portion of the house with the pping boards two or three inches out from the ll it would seem that the system of induced ıtilation could be used. Rough diagram ached.



erhaps Mr. Somerville will enlighten me. I y put forward this idea because many of us e already several houses of the "lean-to" type ch we cannot afford to scrap, but which would ily be adapted on these lines. Needless to say, ıall build in future on Mr. Somerville's plans.

our Dairy Show number is wonderful. Con-tulations and thanks!

Yours faithfully,
E. WIMBERLEY.

FRAME AND THE LARGE EGG.

ear Sir,—You have so often advocated breeding the large-egg factor, it being the only safe cy, as opposed to the ultimate deterioration the insensate high-production craze must in-ably produce. It may, therefore, be of some rest to my fellow-members of the S.P.B.A. if t down a short account of the experience I have had in my attempt to breed for "size," and the benefit that I have reaped as a result.

Some year ago I obtained my original White Leghorns from a neighbouring poultry farmer of some repute. These birds were from Padman, Bell, and Hanson strains—lines of descent in which high production is a dominant characteristic. They were of fair size, and laid fair-sized eggs.

A year or two later, in accordance with the theory put forward by many people that it is folly to go entirely outside one's own strain for fresh blood, I returned to the same breeder for the male birds that I required. These, I was told, were sufficiently removed in relationship to allow of mating to my birds with safety. In "going back" in this way I was of course anxious to retain the factor for high production that I already possessed without running the risk of introducing other undesirable characteristics—I was playing for safety.

The cockerels in question, from high-record dams and obviously full of quality, were small-framed birds and below the accepted weight—guided, however, by the advice of my breeder friend, and generally accepted principles, I kept them. The resultant progeny were long maturing: decrease in size, of both bird and egg, was very evident, and that winter disease broke out. Happily, this was of a mild type, and by taking immediate action in the way of isolation, slaughtering in the worst cases, and the abundant use of disinfectant, we succeeded in saving the bulk of the birds from infection. As it happened we were lucky, and this slight visitation was of no great consequence. I had more than sufficient breeding hens that had escaped infection to carry on with. But it set me thinking. Obviously continuous breeding for high production had lowered the vitality of my birds, leaving their weakened constitutions susceptible to cold and disease. It was the old story that you have so assiduously preached. How many breeders to-day are running this great risk in their constant pursuit after the layer of 240 eggs and upwards? My cure was drastic, I culled my "degeneraate aristocrats" mercilessly—I kept only the biggest birds, provided that they handled well and that they were not absolute "duds."

Then in the following spring I went "right outside" for entirely fresh blood. My best purchase was from a well-known breeder, the owner of perhaps the best Leghorns in the country at the present time. From him I obtained a cockerel from the pen that had gained fourth prize in the Championship Section at Bentley, 1921-2. This bird, which I am still using, is a vigorous, upstanding specimen of his breed, possessing a big frame and length of back, with a fine head. To him I mated the pick of my hens, taking size into first consideration; and from this mating I found myself possessed of pullets of an entirely different type. These were big, heavy birds, with both length and depth of body, though perhaps a trifle coarse in feather. I had jumped the fence. How would they lay? To cut the story short, the whole of my stock is now founded on this mating, and the fact that my White Leghorns have just won the 1924-5 Hampshire County Laying Test (Light Breed Section) is, I think, sufficient answer as to how they lay. I am proud of them, and I shall always be grateful to the breeder. One pullet laid 194 special grade eggs (2⅛ oz. and over) out of 200 in the eleven lunar months of the test. She came home over five weeks ago and is still laying while going through a very gradual moult. Another pullet was only "off" for a period of about six weeks, and came in again to lay seventeen special grade eggs during the last month of the test, just when required. These are no "sprinters," but honest layers of a **reasonable** number of **large** eggs, the type of bird that it is surely desirable to breed for.

What are the points learned from my experience?

(1) The futility of breeding for exaggerated high production, an obviously suicidal policy.

(2) The risk attached to in-breeding, and the fact that this, together with breeding for high production only, **must** ultimately result in general deterioration.

(3) The fallacy of the idea, common amongst many breeders, that in-breeding is necessary to maintain the desirable characteristics of the layer.

(4) The undoubted fact that small birds ultimately mean small eggs.

(5) The fact that size, stamina, and production can be improved upon, to a marked degree, through the introduction of entirely fresh blood, **provided that the antecedents and the individual history attaching to the "fresh blood" are known.**

With these facts you are, I know, in entire agreement, but, despite the constant allusion to them in the columns of your valuable paper, there are many people, including in some cases breeders of some standing, who continue to make the mistakes I have referred to. In several cases where I have had the opportunity of examining stock, rejoicing in a name for exceptional high production, I have found birds little bigger than bantams with records of from "260-290—Mr. Powell-Owen's "little gems"—which that expert is culling from the show bench as rigorously as every breeder should cull them in all his breeding operations.

There are some old-established breeders who, by very careful selective breeding over many years, have retained size and stamina, or, in other words, type and health, together with high production ability, but these are few and far between.

Generally speaking, the reverse is the case. The **prolific degenerate** being a curse of the utility side of the poultry industry.

Yours faithfully,
A. MUNRO-SPENCER.

Poultry-keeping IS Husbandry

IMPORTANT DECISION.

From "The Scotsman," Oct. 28th, 1925.

COURT OF SESSION. FIRST DIVISION.

(Before the Lord President and Lords Skerrington, Cullen and Sands.)

The Division disposed of a stated case fo Frederick H. Lean and John Dickson, Castlehill Symington, Lanarkshire, trading as the Castlehil Poultry Farm Company there, bringing under review a decision of the Commissioners for th general purposes of the Income-Tax Acts, by whicl the latter upheld an assessment made by H.M. Inspector of Taxes on the appellants, under Schedul D of the Income-Tax Act, 1918, for the year 1924-25, in respect of the profits arising from the combined business of tomato-growing and poultr farming carried on by them at Castlehill. Th appellants keep on an average about 1,000 head o poultry stock and between 1,000 and 2,000 chick during the rearing season. In addition they ow 46 sheep, which are grazed on the land. Th poultry and sheep are not segregated, the whol of the land, with the exception of half an acre being common to both. No part of the ground i tilled or cultivated, except the half-acre on whic green food is grown for winter use in connectio with the poultry. The farm buildings are utilise as incubating rooms and for the storing of food stuffs. It was contended for the appellants tha poultry farming was husbandry, that they occupie the lands in question for the purposes of husbandr only or mainly for these purposes, and that the were assessable to Income-Tax under Schedule on the basis of single rent of the subjects onl On behalf of the Crown, it was contended that th appellants carried on a trade or business assessable under Schedule D, and that poultry farmin did not fall within the term "husbandry" i Schedule B of the Income-Tax Act, 1918, and th rules applicable to Schedule B. The Commissione held that the assessment was properly made und Schedule D.

The Division sustained the appeal.

The Lord President said he thought that, whi the use of the fruits of the land in the trade industry carried on upon the land was vital bring that trade or industry within the descriptio of husbandry, it was enough, speaking generall if those fruits were to a material extent used a necessary for the operations carried on upon th land. In the present case it seemed to him impossible to say on the facts alleged that the bus ness of poultry-keeping and poultry rearing carrie on upon those lands did not depend to a materi extent upon the fruits of the lands. Having rega to the facts of the case, therefore, he arrived the conclusion that the judgment of the Commissioners was wrong.

Lords Skerrington, Cullen, and Sands concurre

(Continued at Foot of Previous Column).

Counsel for the Appellants—Mr. Crawford, K.C., and Mr. Garrett. Agent—Murray Oliver, S.S.C.

Counsel for the Respondents—The Lord Advocate, K.C., and Mr. Skelton. Agent—Stair A. Gillon, Solicitor of Inland Revenue.

Eggs and Meat.

By **JOHN MEEKINGS.**

Those of us who keep poultry, do so more or ss for a livelihood—I guess there are few folk -day keeping hens for the pure love of doing so! fact, one meets numbers of poultry-keepers who test the sight of hens altogether—small wonder at they make so little out of them and fall to aming the hen for their poor returns.

The past year or so has recorded severe de- ession in many industries, and in the poultry orld there has been a distinct setback. Cheaper gs and dearer foodstuffs have hit the com- ercial man seriously, lowering considerably the ofit per hen and causing many to sit up and ink around, and not a few to get out altogether.

We all know that if poultry farming is carried t on up-to-date and sound lines, the work is nsiderable, and there must be no extravagance hired labour. On the other hand, the work has compensations. The question one has to ask -day is: "Can enough be made out of hens (on mmercial lines) to repay me for the money in- sted and all the labour yearly expended?"

Poultry farming holds no soft places for sleep- partners. Making careful enquiries, and, from own experience, I have to confess that egg rming, pure and simple on the old lines laid wn during the war, is not now a sufficient recom- nse for the money and effort put into it. I do t say it ceases to pay—there are many who still ke a livelihood out of it—what I repeat is, it difficult to secure enough remuneration from gs to carry on with equanimity. Unless the ultry farmer has unique facilities for cheap feed- , and housing and labour costs are kept low, must find some additional means of increasing profit per hen. Can this be done on a purely nmercial plant? I venture to think not, under present system. I am inclined to think that, ugh we may get an appreciable drop in food- ffs, eggs will not maintain the level of the past years, and we should feel little, if any, benefit. have therefore two alternatives—make the hen more or make her profitable apart from the sale the eggs she lays. The first alternative is hardly ly or desirable—the egg average on many com- rcial egg farms is good, and can be put at -170. Taking into account climatic changes the wear and tear of flock life, we shall not eed this, even with the most careful selection. ither is it desirable from the stamina point of w. The second alternative is more hopeful, and e I think we can make considerable progress. es the present flock of light breed hens pay a e profit other than egg production? I think very little, and often a distinct and disturbing loss. The cockerels from these breeds are the least desirable for table use, as are the hens, and both are being found small and unsuited to the public taste. On the other hand, the heavier breeds give a very saleable cockerel at three to four months, which easily returns a profit. But can we get these heavier breeds to give an average yearly yield comparing at all favourably with that of the light breed varieties? Yes, I think we can! That is, I know from experience, my own and others, that a well-bred and well-cared-for flock of heavy pullets will lay 140-180 eggs over the first season in flocks of about 100, and, what is more important, yield a more regular and heavier production during the autumn and winter months, when eggs are dearest. The period of egg production is important. Pullets coming into lay in late October or November cannot be compared with these earlier broods, which commence in August and September, and give five to six months of steady production when eggs are at their maximum prices.

What is also important—a heavier pullet, if fed rightly, gets into first grade stride long before her lighter relatives.

Now for a point I wish to emphasise. Heavy male chickens ready in March, April and May are in strong demand, and cannot help giving a good profit according to personal management and skill of the poultry farmer. During this past season I have met a number of commercial poultry farmers who, by reason of their table sales, were able to face this coming season with something like equanimity. Not only is the male chicken a valuable asset to the commercial poultry farmer, but the first and second year hens will fetch 50 per cent to 60 per cent. more when finished with than will the light breeds.

I strongly recommend a face about to the commercial egg farmer, who, at first or possibly for years, has been struggling with a situation which returns little for all the time and labour put forth. And I know there are many such. Stake your all on the breed that will lay a good fair average, whose chicken will fetch a little profit at three to four months of age, and which when finished with make 3s. to 4s. instead of 1s. to 2s 6d. There are some excellent first crosses which would serve the same purpose, and give an assured egg yield, as also a plump, useful table chicken. If the questionable profit of 3s. to 4s. per hen, via eggs, could be augmented by 1s. to 3s. secured by way of cockerels sold for table chicken and the extra on the hen when disposed of, there would, I feel sure, be fewer failures.

There are many folk in poultry to-day who in four to six months make as much, if not more, on raising table poultry alone, with much less expenditure of time and money than the average commercial egg farmer makes per pullet per annum.

London Market Advice Table,

NOVEMBER, 1925.

By A. V. CLARKSON.

This month is one which is not of great interest to the average Poultry Farmer, as far as the London Market is concerned. In most cases the surplus cockerels and hens have been marketed, and the farmer should be seriously looking towards next year's production, and in this direction he should get acquainted with the London Market requirements.

When the reader started to read his "Eggs" this week it was rapidly pointed out how necessary was the advice to

"ASK FIRST, and SEND AFTERWARDS."

If this were done in practically every case it would eliminate the possibility of the producer "Paying the Piper."

CHICKEN.—Chicken of really good quality will sell well on the London Market this month because of their scarcity. The main thing for the sender to watch is the weather, because during hot or muggy weather he must take extra precautions to thoroughly cool his birds before packing, and be sure and use a well-ventilated crate.

HENS.—Old Hens will be well in demand this month and onwards, but the demand is for a live hen.

It will pay the sender to specially feed hens that are to be marketed, because a fat hen will always realise top market price, and even a Leghorn if fattened does well.

RABBITS.—Wild Rabbits will be much in demand this month, and realise good prices. They should be sent in special hanging crates, as supplied by the salesmen.

Tame Rabbits are now becoming more in demand, but prospective senders should keep in communication with their salesman.

TURKEYS.—It is very difficult at this juncture to offer advice regarding Turkeys. As I have already explained, the Turkey Market prices are controlled by the supply of Continental Turkeys, and mostly by France. In this latter country there is at present a terrible fiasco with their finance which is sadly depreciated, and unless this is cleared before Christmas, Turkeys look like being very cheap.

ANSWERS TO QUERIES.—Continued.

R. A. W. (Kings Langley) asks would he be eligible to partake in the Food Purchase Scheme, as he is not a member of the S.P.B.A.? He is a "wet-masher," and wishes to know whether he can use the breeder's mash wet. In answer to his questions: (1) No, the Food Scheme is only for members of the Association—the annual subscription is a minimum one of five shillings each member. The breeder's mash can be used either wet or dry.

"Pisaller" (Todmorden) has bought a Prairie State incubator, 200-egg size. He has been checking the temperature, and with the ventilator slightly open, and the heater pulled down, the machine ran steadily at 103 degrees. He then placed a tube thermometer on the front of the egg tray nearest the lamp, and the next in the middle of the tray nearest the lamp, and there is a difference of six degrees between the front and middle of the tray, so he has decided to get rid of the machine, but before doing so he wishes to know my opinion.—This variation of six degrees between the centre and the outside row of the egg tray is not uncommon, and my suggestion to "Pisaller" is that he runs the machine at 105 degrees; turns the eggs three times daily, removing those from the centre to the outside, and those from the outside to the centre. I do not think any serious trouble is likely to arise if this is done. Certainly it is worth a trial, and I would not get rid of the machine until I had tested it.

The Chinchilla Rabbit for Fur.

By H. J. GARDNER.

During the last few months I have had a numbe of letters from all over the country, also from abroad, asking for information concerning the Chinchilla Rabbit and its possibilities.

Do rabbits pay? Can a living be made from th Chinchilla, etc.? Yes, the Chinchilla Rabbit doe pay, and pays handsomely. A profit of at least £ should be made from every breeding doe with th present prices paid for skins.

A good doe should have at least fiftee youngsters a year, and these when killed at seve or eight months old should average 12s. each o more. Of course, many receive a much highe price, but as I have only to prove that £5 can b made from one doe I will say 12s. as the average Then there is the carcase, which is cheap at 2s So each of the youngsters will bring in 14s., whic amounts to £10 10s. Against this there is th food bill, which is no small item when one ha several hundred to feed. At the present prices c food a rabbit can be fed on 2d. per week. Th youngsters should cost about 5s. to pelting age, s 9s. profit is left. Then there are the hutches an saucers. These should cost not more than 2s leaving 7s. per rabbit; 15 rabbits at 7s. each £5 5s.

The breeding doe will cost a little more than th pelt rabbits, as she will require a bigger hutch ar extra feeding when the young are with her; sh should not be fed too liberally until after th young are born.

Then there is the buck. I should always advi keeping a stud buck when several does are kep It is cheaper and much better than sending th does away to be mated. The stud bucks shou be housed in big roomy hutches and should well fed.

The does are taken to the buck, and one strikii is all that is needed.

Another question which is often asked:—Is the a good demand for skins, and must the skins ha perfect markings, or is it a question of conditio There is a good market for Chinchilla pelts, b they must be well moulted out. The markin must be good, but however good the fur is, if it h black marks, it is not moulted out, and is n ready for killing. It will not be a first grade p and will not command a good price. Many a go skin has been spoilt by killing before it is ready.

I have had numerous questions on feeding, a during the last five years I have tried many differ sorts of feeding. Now with 500 rabbits I feed simple as possible. Plenty of greens, such chicory, kale and roots. Of course, wild plants good, but it would take too long to pick enou for 500 rabbits, so I grow all my own green fo Hay, I like the best I can get (clover), meadow change sometimes. The rabbit should always ave plenty before it. The grain feed, I like rushed oats, not too husky. I find that the abbits do well on oats. Mash I give for a change, omposed of three parts bran, three parts sharps, nd one part Sussex ground oats. This mixed in crumbly state, when I can get a really good ran, which is not often. I sometimes give it dry nstead of oats. I do not give any milk. I have ried goat's milk, but find that is not necessary, nd it is expensive. I do not condemn milk, but do not think that it is necessary. I find plenty f hay and green and one feed of oats or mash a ay is all a rabbit requires. To a doe with young give extra hay and green, and oats night and orning. Water at all times to all rabbits.

The success of rabbit-keeping depends largely n the individual, and if run on business lines it an be made a very profitable business or sideline.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

APPLICANTS FOR MEMBERSHIP.

rtwright, W., Ryeway P.F., Long Sutton, Somerset.
ylie, Miss A., Gallowberry, Stewarton, Ayrshire.
rnes, J., 23, Gisburn Road, Blacko, Lancashire.
cher, R. C., 12, "C" Terrace, Stanhope Lines, Aldershot, Hants.
iers, W., 53, Moray Road, Tollington Park, N.4.
apman, Miss E. L., Fairview P.F., Wickham Bishops, Witham, Essex.
msell, Mrs. H. E., Bryngarth, Grosmont, Hereford.
msell, Mrs. H. E., Bryngarth, Grosmont, Hereford.
binson, N. S., The Beeches, Hundleby, Spilsby, Lincs.
vington, Miss H. M., Wybournes, Kemsing, near Sevenoaks
uch, T. T., Foxholes Farm, Hertford.
ington, Mrs. M., Homelands, Southfield Park, Harrow.
erd, Miss G., Thirlmere, Southfield Park, Harrow.
nstou, Mrs. G., Porloe Mylor, Falmouth, Cornwall.
nston, R. G., Porloe Mylor, Falmouth, Cornwall.
enderson, Capt. R. R., Studley Priory, near Oxford.
endersor, Mrs. R. R., Studley Priory, near Oxford.
therton, J., Kingscott Farm, Flax Bourton, Somerset.
aryeato, A. E., Australorps Farm, Flax Bourton, Somerset.
eaman, J., Woodmill, Flax Bourton, Somerset.
nders, H., Homedene P.F., Hayling Island, Hants.
one, H. T., Sendholme, Potters Heath, near Welwyn, Herts.
tler, D., Cross Farm, Walgrave, Northants.
itchell, J. A., Cheveley, near Newmarket.
nnett, W., 204, Brixton Hill, S.W.2.
lloway, S., The Butts, Bisley, near Stroud, Glos.
ent, J. T., Glen Innes, Park Road, Ramsden Bellhouse, Billericay, Essex.
ter, B. A., Buntworth Lodge, Alton, Hants
ennepe, Dr. B. J. C., Jun., Diergaardesingel, 96a, Rotterdam.
iley, G., Lynells, Totteridge Green, Herts.
y, C. H., Ministry of Agriculture for Cornwall, County Hall, Truro, Cornwall.
adland, James, Shepherd's Hill P.F., Harold Wood, Essex.
ift and Sons, Messrs., Olympia Works, Scarborough.
lison, A., 1, Garsden Avenue, Small Holdings, Blackburn.
rch, T. R., Old Forge Farm, Southboro', Kent.
mford, T., The Mead, Ashstead, Surrey.
ant, R., 28/30, Springfield Place, Hunslet Carr, Leeds
ells, P., 7, Ruby Place, Wisbech, Cambs.
derson, A., Poultry Farmer, Sheringham.
ughton, T., 32, Mansfield Road, Clown, near Chesterfield.
illiams, Mrs. M., Loddon Court, Spencer's Wood, Reading, Berks.
tley, J. B. S., Halgavor House, Bodmin, Cornwall.
les, W., Ashgrove, Fyvie, Aberdeenshire.
dler, L. S., The Lache's P.F., Chester.
int, J., 790, Shields Road, Walker Gate, Newcastle-on-Tyne.
rry, W., Withnell's Farm, Brinscall, near Chorley, Lancs.
igh, Joshua, South Park P.F., Flockton, near Wakefield, Yorks
iverwell, Mrs. C., "White Lodge," Brent Knoll, Somerset.
ithnell, J., Shaw Brow, Whittle-le-Woods, Chorley, Lancs.
umford, W., The Gables, Hardwick, near Plympton, Devon.
ler, J. W., Paddocks Cottage Farm, Ferndown, Dorset.
rlington, W. D. T., Kent's Farm, Winsor, Woodlands, Hants.
illiams, C. H., Coppice House, Coalbrookdale, Salop.
hton, Mrs. V., Scotsgrove House, Thame, Oxon
rawson, Mrs. I. E., Straggletborpe, Radcliffe-on-Trent, Notts.
iers, Mrs. H., Houston House, Houston, Renfrewshire.
xon, H., Shirtcliffe P.F., Woodhouse, Sheffield.
wyer, A. S., Hill Corner, Cove, Hants.
nith, Miss S. R., East Tilbury Place, Essex.
iley, H., 21, Yorkshire Street, Nelson, Lancs.
verley, E., Revesby Manor, Boston, Lincs.
rlong, Miss M., The Poplars, Boxmoor, Herts.
Prichard, Mrs. E. A., "Nanty-gwern," St. Maughans, near Monmouth.
Dibble, Miss K. A. B., Plantation House, Banwell, S.O., Somerset.
Lambert, C., 2, Myrtle Place, Birgley, Yorks.
Hamilton, A., P.O. Bergrlie, Wynberg, near Johannesburg, S.A.
Ewin, C. A. A., Coombe Brook, Kingston Hill, S.W.
Bowen, W. T., "The Warh Farm," Furneaux Pelham, near Buntingford, Herts.
Willoughby, Mrs. M. E., Barnes Farm, King's Langley, Herts.
Matheson, J., Holdingham Mill House, Sleaford, Lincs.
Kane, J. A., The Station Pedigree P.F., Morpeth, Northumberland.
Beardsall, L. C., Domaine de l' Abbaye, Argues la Bataille, Seine Interieure, France.
Spence, Mrs. I., 76, Woodhorn Road, Ashington, Northumberland.
Dennis, Mrs. S. E., Heathdene, Shrub End, Colchester.
Clark, Miss M. Foster-, Boughton Mount, Maidstone.
Lewis, Mrs. E. W., 56, Plymouth Road, Penarth, Glam.
Rutherford, Mrs. M., 15, Maple Street, Birkenhead, Cheshire.
Preston, Mrs. I. M., Chester Road, Poynton, Cheshire
Chester, F. E., Guarlford, Malvern, Worcs.
Jenkins, Mrs. E. W., Cartref, Great Barton, Bury St. Edmunds.
Meakin, C. E., 2, Berkeley Villas, Pittville, Cheltenham.
Ballard, R., Racecourse P.F., Crowmere, Shrewsbury.
Parkinson, T., 10, Livingtone Street, Brierfield, near Burnley, Lancashire.
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Sautoy, Mrs. B. M. du-, The Willow House, Elmswell, Bury St. Edmunds.
Humphreys, W. H., Alford, Lincs.
Philipson, E., 13, Melrose Terrace, Bedlington Station, Bedlington Colliery, Northumberland.
Dowson, L., Barnes Town Foot, Slaggyford, Northumberland.
Mason, J. W., Greenlands P.F., 1, Red Lees Road, Towneley, Burnley.
Harris, E. O., "Summerland," Balsall Common, near Coventry.
Bell, F. H., 43, Winterwell Road, West Melton, near Rotherham, Yorks.
Smith, F. J., Blenheim House, Kemerton, near Tewkesbury
Mellows, G. W., 67, Newark Road, Lincoln.
Bolton, J., Junr., Maukin Lane P.F., Birtle, Bury, Lancs.
Frankland, J., The Poultry Farm, Whittle Hill, Woodplumpton, near Preston.
Fox, A., Acacia House, Aslockton, Notts.
Charles, M. T., Fruitlands, Eynsham, Oxon.
Payne, F., Wern, Glais, Swansea.
Porter, J., Cromhamstone, near Aylesbury, Bucks.
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Cooper, G., Brazils Farm, Woodham Ferrers, Chelmsford.
Thomson, T., Forthview Cottage, Southmuir-by-Polmont-Station, Stirlingshire
Beaugie, R. B., Ruette Pinel, Mont-a-L' Abbe, Jersey, C.I.
Snoxall, C. E., Woodbank P.F., Doddington, Kent.
Herbert, J. G., Great Boulsdon, Newent, Glos
Goddard, C. W., Lodge Farm, Ashill, Thetford, Norfolk.
Moore, Miss M., The Tower House, Redlynch, Salisbury, Wilts.
Fitzwilliam, E., Barnsdale, Oakham, Rutland
Smith, F. W., 24, Blockall, Darlaston, S. Staffs.
Burnett, S. E. S., Berryhill P.F., Arbroath, Scotland.
Rothwell, A. E., "The Green," Halewood, near Liverpool.
Oliver, J., 338, Manchester Road, Tyldesley, Manchester.
Thirsk, J., Bourne Mill, Hadlow, Tonbridge, Kent.
Riley, F., 22, Horley Green Road, Halifax, Yorks.
Dunn, C. H., 37, Admiralty Street, Devonport.
Marwood, J., Highfield, Nunnington, York.
Nuttall, W., 116, Garforth Street, Chadderton, Oldham.
Wright, F. G., Cuttingyle P.F., Crawley Down, Sussex.
Verdin, J., 2, Rural Terrace, Wye, Kent.
Mawby, Miss L. Hamilton-, Wykeham, Spalding, Lincs
Fairgray, G. M., Moorside Farm, Hollingworth, Cheshire
Wright, Mrs. M., Bryn Feg, Bryn Feg P.O., Menai Bridge, Anglesey.
Knox, Wm., North Greenford, Monikie, near Dundee.
Trowell, E., Wittering, near Peterborough, Northants.
Dyer, G. T., Lower Quickedge Farm, Grotton, Springhead, near Oldham
Maddison, R., 7, Harle Street, Browney Colliery, near Durham.
Smith, Miss D., The Willows, Waterford, Hertford, Herts.
Davies, Miss G. R., 46, Springfield Road, Wallington, Surrey.
Matthews, H., Manselton Hotel, Manselton, Swansea.
Parsons, J. H., Dearne Mills, Bolton-on-Dearne, near Rotherham.
Dore, F. W., 383, High Road, Chiswick, W.4.
Milnes, W. H., Tudor Cottage, Austby, Ilkley, Yorks.
Holliday, Mrs. A., Winterton Farm, Warings Green, Hockley Heath, Warwickshire
Dawson, Hon. Mrs. M., Barrow Hill, Rocester, Staffordshire.
Walker, F. T., 215 Manchester Road, Droylsden, Manchester.

LIVERPOOL AND DISTRICT BRANCH.

The November Monthly Lecture of the above branch will be held at the Albany Room, Palatin's Cafe, Lord Street, Liverpool, on Saturday, 14th November, 1925, at 7 o'clock prompt. Lecturer, Mr. Jack Wrennall, Rosemary Farm, Bartle

Egg Show will be held previous to the lecture. Judge: Mr. J. Wrennall. Four classes: White, Brown, Tinted (four eggs); plate of 12 mixed eggs (four each of White, Brown and Tinted). First and Second Certificates in each class. Also 5s. special in each class if ten or more entries. Entrance fee 6d. per plate.

All entries to be received by the Hon. Sec. by 6 45 p.m., R. J. Thomas, 9, Grey Road, Walton, Liverpool.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY. 31st OCTOBER, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in rather small supply and meets a fair demand at higher prices, the average quotation being 10s. 11d. per cwt. as compared with 10s. 8d; in the previous week. Imported wheat is in moderate supply and generally realises slightly higher prices. English malting barley is freely offered and sells at about recent prices, ordinary samples meeting a dragging trade, but finest samples are scarce and in request, and at London make from 17s. to 18s. 9d. per cwt. British feeding barley records little alteration in value but prices have a firmer tendency, the average quotation being 8s. 9d. per cwt. Trade for imported feeding barley has varied at the different markets, but generally prices have advanced slightly on the week. Home-grown oats mostly meet a slow trade at late rates, while imported, spot supplies of which are on the short side, generally have a firmer tendency. Maize is in fair request and dearer, Argentine averaging 8s. 11d. per cwt., an increase of 4d. on the week.

Coarse middlings and bran meet only a moderate trade, and the former is reduced 5s. per ton at Bristol and Hull, while the latter, owing to an improved demand, is 5s. per ton dearer at Liverpool. Barley meal is in fair request and dearer at most markets. Trade for oil cakes is slow and linseed cake is slightly cheaper at London and Bristol, while at some centres cotton seed cake is reduced in price.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull, £7 2s; Liverpool, £7 5s; London, £6 17s. Broad Bran: Bristol, £8 17s; Hull, £8 12s; London, £8 5s. Middlings—Fine (imported): London, £9 5s; Coarse (British): Bristol, £8 17s; Hull, £9; Liverpool, £8 15s; London, £8 5s. Pollards (Imported): Bristol, £7 5s; Hull, £6 15s; London, £7 2s. Rice Bran: Bristol, £7 10s; Liverpool, £7. MEAL.—Barley Meal: Bristol, £9 15s; Hull, £9 10s London, £10 2s. Maize Meal: Bristol, £10 15s; Hull, £9 10s; Liverpool, £9 10s; London, £10. Maize Meal (S. African): Bristol, £9 10s; Hull, £8 10s; Liverpool, £8 10s; London, £8 12s. Maize Germ Meal: Hull, £9 10s; London, £9 10s. Maize Gluten Feed: Bristol, £11 7s; London, £9 15s. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 5s; London, £9 12s. Bean Meal: Bristol, £13 15s; Hull, £11 3s; London, £12 5s. Fish Meal: Bristol, £21; Hull, £20 10s; Liverpool, £20 10s; London, £20 10s.

EGGS AND DEAD POULTRY.

With new-laid eggs seasonally short, quotations for these continue to advance, while lower-priced grades of eggs are also dearer on the week, although the latter are in only moderate request. Slight fluctuations are shown in the figures for dead poultry, but prices are little changed, on the average, business being on the quiet side.

Week-end Prices—Eggs (per 120): British, 28s 6d, 22s 9d; Irish, 27s 3d, 25s 9d; Danish, 26s 9d, 25s 6d; Dutch, 27s 6d, 25s 3d; Canadian, 20s 3d, 19s 3d; Belgian, 25s 0d, 23s 9d; Italian, 22s 6d, 21s 3d; Argentine, 17s 6d, 16s 0d; Lithuanian, 17s 6d, 16s 6d; Polish, 13s 9d, 13s 3d; Chinese, 15s 0d, 13s 6d; Russian, 15s 9d, 13s 0d; Australian, 22s 3d, 21s 3d; Esthonian, 17s 0d, 14s 0d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 6d, 1s 2d; Irish, 1s 0d, 11d; Others, 1s 2d, 11d. Ducks, 1s 2d, 1s 0d. Geese, 1s 1d, 10d. Turkeys, 1s 6d, 1s 3d.

EGGS.

Per Doz.—Ashford: First, 3s 3d; Second, 2s 11d. Birmingham: First, 3s 0d; Second, 2s 9½d. Bridgwater: First, 3s 6d; Second, 3s 1d. Chelmsford: First, 3s 3d; Second, 2s 10¾d. Colchester: First, 3s 3½d; Second, 2s 8½d. Doncaster: First, 3s 3d; Second, 3s 1d. Dorchester: First, 3s 2½d; Second, 3s 1½d. Exeter: First, 3s 0d. Hereford: First, 3s 0d. King's Lynn: First, 3s 0d; Second, 2s 9d. Llandilo: First, 3s 0d. Mold: First, 3s 0d; Second 2s 10d. Newport (Mon.): First, 3s 0d; Second, 2s 9d. Norwich: First, 3s 0d. Oswestry: First, 3s 3d; Second, 3s 2d. Penzance: First, 2s 9d; Second, 2s 8d. Saffron Waldon; First, 3s 7¼d; Second, 2s 10¾d. St. Ives (Hunts): First, 3s 2½d; Second, 3s 0½d. Salisbury: First, 3s 2d; Second, 3s 1d. Skipton: First, 3s 0d. Truro: First, 2s 6d. Welshpool: First, 3s 0d; Second, 2s 9d. *Carlisle: First, 3s 3d. *Derby: First, 3s 0d. *Ipswich: First, 3s 0d; Second, 2s 6d. *Lincoln: First, 2s 9d. *Shrewsbury: First, 3s 6d; Second, 3s 4d. *York: First, 3s 3d.

FOWLS.

Per lb.—Birmingham: First, 1s 1d; Second, 9d. Doncaster: First, †5s 0d; Second, †4s 0d. Exeter: First, 1s 2d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 5d; Second, 1s 3d. Newport (Mon.): First, 1s 6d; Second, 1s 2d. Truro: First, 1s 4d. Welshpool: First, 1s 2d; Second, 1s 0d. *Derby: First, †5s 0d; Second, †3s 6d. *Ipswich: First, 1s 6d. *Lincoln: First, †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 6d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 2d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 5d; Second, 1s 3d. Welshpool: First, 1s 1d; Second, 11d. *Derby: First, †4s 6d; Second, †3s 6d. *Ipswich: First, 1s 4d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 9d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per **head.**

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street London, S.E.16. Telephone: HOP 894.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add tha the earlier in the week we receive copy the better it is for every one concerned.

Classified Advertisement Rates will be found at top of first pag of classified advertisements.

PROOFS.—We cannot guarantee to submit proofs unless com plete copy is to hand by FIRST POST ON THE MONDA PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSU

UTILITY DUCK CLUB.

The Annual General Meeting of the above took place at th Dairy Show on Thursday, October 22nd. Mr. Stanley Stree Porter took the chair, while the majority of the Council attende together with a very considerable number of members.

The Chairman, in his opening address, called attention to th fact that membership had increased most satisfactorily durin the past year, and that the work of the club had grown to suc an extent that it had become impossible for the Hon. Secretar and Treasurer, Mr. H. B. Carrington, to carry on without fu ther help. He, therefore, put it to the meeting as a recommen dation from the Council that a paid Assistant Secretary be appoi ted (a recommendation subsequently adopted by the meeting He extended a hearty welcome on behalf of the club to Dr. J. C. te Hennepe, the well-known bacteriologist at the State Seru Institute, Rotterdam, Holland, who had come over specially visit the Dairy Show. He mentioned how much indebted w were to him for several instructive articles from his pen whic had appeared in previous numbers of the Year Book. He dre attention to the success with which the Duck Egg Campaign ha met, and asked for the continued support of members both fina cially and otherwise. He also urged the importance of cultivatin the Export Trade.

The financial statement for 1924-25 was then read by the Ho Secretary, who pointed out that about £200 had already bee spent on the Duck Egg Campaign, and that he had received man letters which showed that members had benefited very materiall through the campaign, both by the help given in making market for their produce and in improved prices He reported satisfactory balance at the Bank in spite of the heaviest expend ture the club had ever undertaken, while the figures give showed a great expansion in the revenue. He felt that, from business point of view it was essential for members to appoi an auditor.

Time being short, the remainder of the business had to hurried through as quickly as possible. Mr. Stanley Street-Port was unanimously re-elected President, the posts of Vice-Preside and Hon Secretary being again filled by Mr. Oscar C. Brown an Mr. H. B. Carrington; vacant places on the Council were filled the election of Messrs. T M. May, A. M. Johnson, and Capt. J. Lipscomb: while Colonel Sandbach volunteered to undertake t work of auditing the club accounts, and was unanimously elect to fill that office. Messrs. A. E. Hamlin and Co. were re-elect as Hon. Solicitors to the Club, Mr. Hamlin. who was present, bei thanked by the President for advice and help given in the past.

The meeting concluded with a vote of thanks to the Briti Dairy Farmers' Association for having kindly placed the roo at the disposal of the club.

CLUB STAND.

It will be of interest to members to know that over 40 ne members joined the club during the show, while large numbe took away particulars of the club, or sampled the advice whi they would be entitled to receive on becoming members.

Duck egg propaganda work was well maintained by the sa of over 130 dozen eggs. There appeared to be no limit to t demand, for very much larger quantities could have been so with ease had supplies been available. It is clear that the publ is beginning to realise the food value and appetising qualities the high-grade British Duck Egg

EG

EGGS

THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

egistered at the G.P.O. as a Newspaper.
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Edited by TOM NEWMAN.
Price TWOPENCE.

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Six Months " " 6/4
Three Months " " 3/3

Extensible Unit Buildings.

If your pullet egg yield does not average about 200 there is something wrong. Many clients have raised their average from 150/160 to over 200 eggs; we can ensure that figure without any alteration to your plant. Consult us.

The photo shows one of a number of All-Purpose Laying and Rearing Houses fitted with the "Millbridge Water Trough" on Major Howard Marsden's Poultry Farm.

These troughs were designed by Major Marsden for large flock houses; the arrangement is extremely simple, and ensures a constant and absolutely clean supply of water. The actual drinking container is Porcelained. Fullest data will be supplied on application to Major Howard Marsden.

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Goods sent on 24 hours' approval.

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SANDOWN, - - I.O.W.

The "Heydown" Pre-eminent Strains

deserve praise and get it!

THIS WEEK'S TESTIMONIAL.

THE "HEYDOWN" STRAIN IN THE ORKNEY ISLES.

"The 30 White Wyandotte hens, recently supplied Kirkwall, are a very special lot, and ever since their arrival have *daily exceeded 50 per cent., eggs* laid, and are still keeping up their reputation."

(Good going this for October production).

W.L., W.W., B.L., L.S., R.I.R.

Send a postcard at once for our illustrated catalogue.

JOHN H. DOWDEN & SON,

"Heydown," Heathfield, Sussex.

The 'Eclipse' Poultry Houses

Manufactured by a PRACTICAL POULTRY FARMER.

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Supplied to
Capt. J. C. Sutton,
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SATISFACTORY VENTILATION IS PROVED BY RESULTS, NOT BY THEORY ONLY.

Our own experience over a period of nearly 10 years with "Eclipse" Houses has been absolute immunity from colds, roup, or kindred ailments amongst the stock so housed.

This we believe would also be the testimony of all our customers. With these houses FLOOR VENTILATION is not necessary, but is provided for and obtained when desired by the simple adjustment of window buttons.

Fullest enquiries and inspection invited.

A specimen No. 2 House will be on view at our STAND, No. 36, CRYSTAL PALACE, November 17th-19th.

HERBERT W. MARTIN, PERIVALE POULTRY FARM & APPLIANCE WORKS, EAST HARLING, ATTLEBOROUGH, NORFOLK.

EGGS
THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association
WEDNESDAY, NOVEMBER 11th, 1925.

Editorial.

THE DUD.

> "I have gone very exhaustively into the financial side of the matter, and find I am losing very heavily on the number of duds I now have. I have been advised to retain only those of four-fingered capacity in my flock of 1,000 layers, discarding all others."

The above is an extract from a letter received from a correspondent. Whoever was responsible for such advice must have been very deficient in practical knowledge, and if our correspondent had followed it, he would have learnt, to his cost, that he had scrapped many pullets capable of putting up excellent records. Anyone who has trap-nested a flock of pullets will know that the test is not reliable, and that a three-fingered bird is quite capable of laying 200 or more more eggs in the year.

We have always maintained that with any handling test we should aim rather at the elimination of the dud than the attempting to select the ayer. It has been said that this is splitting hairs, a distinction without a difference. But it has this difference, that in attempting to select the high-record hen we very frequently grade out good birds, and often include bad ones. We have all the evidence we need that this is so in the utility shows, where specials are not infrequently awarded to birds which have not upheld the judge's award when submitted to the acid test of the trap-nest. When we work on the lines of eliminating the dud we are doing something which is fairly obvious, and which is a far safer process for the commercial egg farmer.

It is astonishing that such a high percentage of duds should be carried on our commercial egg farms, and that those engaged in this branch of the industry do not study more carefully the art of culling a flock. On several farms at this moment t would be possible to go and cull pullets, which one may say with a degree of certitude will not contribute anything to the egg basket on this side of Christmas, and whose career as layers will be a very short one, for your late starter is almost invariably quick to finish.

More particular attention should be paid when the birds are placed in their permanent laying quarters. Assuming we are dealing with a flock of Leghorn pullets, April hatched, it would certainly pay the owner to ring all those birds which are most forward, as indicated by the development of comb and wattle. These are the birds which will as a rule prove the best layers in the flock, and a little observation during the next few weeks of their career will tell him much which should be useful as a guide as to their future value. A mark on those birds which are least forward, and a further examination at the end of November, should indicate to him whether they are worth retaining or not. In the majority of cases they will not be worth keeping. If the birds are not culled at this time they are usually held over until July or August, and reliance is placed on the date of the moult as to the selection of the breeders, with the result that a high percentage of birds have been held for months after the probability of their being profitable could have been decided, and much money expended on foodstuff saved. In any case, if at the end of November the owner does not feel confident in his ability to cull the duds, that difficulty should be overcome a month later, and it will be profitable to do so then. At that time he can rely on the fact that pullets with less than three-finger capacity will prove the poorest of producers. If he is skilful enough, he would have no difficulty in finding these birds without handling them. The pigmentation test is fairly reliable at this season, although not entirely so. The "Handling and Observation" charts, obtainable from this office for 1s. 3d. post free, should be of the greatest assistance to him. Careful grading should result in increasing the average production of a flock of moderate layers by at least 20 per cent. in the course of a year or two, but the grading should not be left, as it is on so many farms, until the moulting season arrives. Selection of breeders by the date they moult is useful certainly, but it is far from infallible. Potential breeders should be rung when they are placed in their permanent quarters in September, examined again at the end of December, and the final decision made in the autumn of the following year. Good head points, tight feather, and flat bone are the best indications, and are far more reliable than the thickness of the pelvic bones, for a pullet which has inherited fine pelvic bones has not necessarily inherited high fecundity.

AN IMPORTANT RESOLUTION.

Mr. W. H. Farnell moved a very important resolution at the General Meeting of the S.P.B.A. which has hardly attracted the attention it deserves. It was to the effect that the weights of birds registered in the Association's Annual Register should be recorded, as well as the number and weight of eggs, and that a committee should be appointed by the Council to draw up a standard for members' guidance. Although no immediate result is to be anticipated as a consequence of the resolution, we are convinced that the great majority of our readers will agree that it is a step in the right direction. An inspection of the White Leghorns benched at the Dairy Show would confirm this opinion, and the same remark is applicable to the Wyandottes, while there are indications that it will soon apply to the Rhode Island Red. While we would be far from suggesting that increased body size will mean a larger egg, it will do a great deal to check the inclusion of the precocious pullets in the breeding pen, and to that extent it will do something to improve the size of egg. What is probably of greater importance, it will tend to improve stamina and lead to the production of a more economic bird. Nothing drastic should be attempted. We are not out to breed great coarse birds, we want the medium size, and the avoidance of extremes. When we see Wyandotte pullets entered in a test weighing 3 lbs. 12 ozs. and Leghorns weighing less than 3 lbs., it is time that some serious attempt was made to improve matters. It would not be asking too much of the breeder if the minimum weight of a Wyandotte was required to be 5½ lbs. at the end of her first year's production, and a Leghorn 4¼ lbs. In a leading competition the winning pen of Wyandottes averaged 5 lbs. 12 ozs. each at the end of the test, and had laid an average of 235 eggs per bird in 48 weeks and were still in full lay. There is an authentic case on record of a Light Sussex which laid 262 eggs in 48 weeks, her body weight at the conclusion was 7 lbs. 8 oz.; only 14 of the eggs were second grade.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex.

The Financial Year began on 1st September.

Some Fruit-Growing Notes
to help Poultry-Keepers.

By **F. W. WHEELER, F.R.H.S.**

AUTUMN NOTES (continued).—I hope my regular readers will forgive the digression from "Autumn Notes" to the lighter article of October 21st, but I felt sure that the next point promised to be dealt with—namely, planting—would still be in plenty of time for the work to be started in spite of my delay.

Having given our attention to (a) type and variety of trees we intend to grow; (b) age; (c) numbers required; (d) self-fertile or self-sterile, and early ordering as advised, we should soon be expecting delivery of goods from the nurserymen.

November and December planting is, I think, the ideal time, and always gives the trees a better chance of taking hold of the still warm soil. On the heavier ground, in particular, it will be more workable than when the soil has become saturated with the winter rains.

If the sites have been arranged in advance and staked out, as I have also advised, we can at once start on preparing the holes or pockets so that the actual planting will then be more quickly carried out, which is undoubtedly a great gain during the short days.

I take it that the majority of poultry-keepers will be planting in pockets in their grass runs and not so much in cultivated fields or plots of ground, so some of my following suggestions, or reminders, will apply in particular to the former. Take special care that where trees are going in grass land, that the valuable top spit is used. This turf is best buried about 10 inches so as to come under the roots of the trees. It may seem unnecessary to mention this, but I have known of cases where it has been removed and left in heaps elsewhere, and one instance I have in mind is of a man proposing to sell some good turf off his land where he intended to plant, little realising the value of his top soil.

The size of the pockets should be, in area, about 3 feet square, or circular, and the depth about two spits—that is, the lower one would be just dug over, and the turf cut up or laid face downwards on this layer, keeping always on top the best and lightest soil in which to actually plant the trees.

Bear in mind a few things which I will mention in brief:—(1) If your soil is on the heavy side, do not put the roots too deep (on heavy land, trees are sometimes planted almost on top of the land and soil left in a slight mound over the roots).

(2) Do not be tempted to use up your surplus poultry manure in preparing these pockets; the putting of a layer of manure under the roots when planting is a mistake. Young trees do not require manure at first, but, of course, any rotted manure

hat has been well worked into a cultivated piece f ground is quite a different thing, the working f the soil being then beneficial.

(3) Spread out the roots evenly and flat so as o encourage them to spread horizontally and not o strike downwards into the heavier and colder oil.

(4) Have nice crumbly soil handy to work well mongst the roots ; this is important in order to elp the fibrous roots to get a quick hold, and it s equally important, when replacing the soil, to ress or tread firmly several times during the peration, leaving, of course, a top covering of oose soil.

(5) I think it is a distinct advantage to have all e stakes driven into position before planting ; it ot only helps to put in the trees more quickly, but ssures them being tied up at once. I cannot npress too much upon the necessity of not leaving ewly-planted trees unstaked, for autumn gales pring up very suddenly and much harm can so be one to the roots left unsupported. Tie the trees o the stakes so that they cannot rub and damage e bark, as tightly as possible, allowing always or the development of the stem.

(6) Keep a plan of your trees with their names ecause the labels soon become unreadable, and hen pruning in after years it is necessary to know e variety, as the pruning of all varieties is not xactly the same.

(7) Do not prune the trees when planting, but ut, or clean away, damaged branches or parts, kewise any broken roots.

(8) The preparing of the pockets in advance is good thing, but do not leave the holes open, or ith heavy rain they will become receptacles for ater, and the sodden soil will hinder instead of elping a quick planting operation.

(9) Be sure and remove any couch grass or other qually troublesome weeds when preparing the ockets, for it will be almost impossible to do so hen the trees are growing.

(10) Lastly, a warning to protect for a short me, with wire netting, the pockets, because if irds are in the runs at planting time they are sure o want to scratch about in the nice loose soil, and ill not consider the question of damaging your urface roots.

As I want to reply to some queries, I must again reak off from "Autumn Notes."

CORNWALL.—Thanks for your letter and the ample of diseased leaves sent for guidance. From ese and what you say I think there is little doubt at your trouble is the common fungus-disease nown as "Scab." Your after remarks, respecting the fruit, confirms it, for the "dark patches" sually spread from the leaves to the fruit, and revent its proper development, generally causing to crack badly (it is also common on pears and ith worse results).

At this time of the year start your warfare by gathering up fallen leaves and burn, also destroy useless fruit and do not leave it lying about.

(Continued at Foot of Next Column).

As the fungus occurs on young wood in the winter and spores hibernate in cracks in the bark, spray with "copper sulphate" solution, and in the summer spray two or three times with "Bordeaux Mixture" or "Lime Sulphur." All these sprays can be bought ready mixed, and with full instructions as to strength for application.

FIGS.—In reply to this query, I might say, firstly, that these are self-fertile, and therefore need not "be planted in pairs," but remember when ordering trees that some varieties are more suitable for outdoor cultivation, such as "White Marseilles" (early), "Brown Turkey" (mid-season), generally considered the best all-round for outdoor culture, or "Brunswick" is rather later fruiting variety.

RHUBARB (Manuring).—It is a common practice to put a dressing of strawy-stable manure over this in late winter, but I prefer to prick into the soil around the stools a little natural manure (poultry if you like) and supplement this with an artificial, say three parts superphosphates, one of potash, and three or four of nitrate of soda, using about 3 ozs. to the square yard.

The chief thing to bear in mind in manuring Rhubarb is to aid a quick growth, and the chemically dressed rhubarb (especially with the use of nitrate of soda) will be found to be more crisp and tender, and trials have shown that it takes less time to cook, and when cooked is more pleasant to eat than the rhubarb grown more slowly by the use of dung alone. In short, we do not want to aim for large (and coarse) stems, but for a quick growth.

OTHER SUGGESTIONS.—I will deal with these another time, for I have already greatly overrrun my allotted space. I think you will find that my book, published by the S.P.B.A., on "Fruit Growing for Poultry-keepers," 1s. 3d. post free, will answer some of your queries.

Modern Poultry Feeding.

By **TOM NEWMAN.**

A correspondent has sent me an article entitled "Feeding for Winter Eggs," which is taken from a contemporary, and he asks my opinion.

The writer begins by saying:—

> In deciding upon the mixtures to be used for feeding the winter layers, there are two main points to be considered. In the first place, the body of the bird must be properly nourished; in the second place, sufficient material for the formation of a large number of eggs must be provided. It may be taken that the grain ration supplies the material for the former need, while the mash constitutes the source of the raw material required for egg making.

He then goes on to say:—

> It will be seen, therefore, that the proportion between these

two classes of food is highly important, as if too much grain be fed the fowls will lack egg-forming substances, while if too much mash be fed—unless the composition of the mash be altered—the upkeep of the body will be interfered with.

This is an idea which has never occurred to me, and it certainly requires a little explanation. I wonder whether the writer is aware of the very small percentage of carbo-hydrates, of which the grain principally consists, contained in the body of a fowl. Seventy per cent. of the body weight is composed of water, the bulk of the remainder consists of proteins and fats, while only a very small quantity of mineral matter, and still less of carbohydrates, are to be discovered.

The first part of his article is very misleading, and the body of the bird would certainly not be properly nourished if it depended upon the grain feed, and while the composition of the mash is admittedly an important factor in egg production; it is equally an important factor in the maintenance of the body.

The writer then goes on to say:—

> As the grain ration regulates the physical condition of the birds, its composition and the manner in which it is supplied are important.

What is actually meant here by "physical condition" it is a little difficult for us to understand, and the writer fails to explain.

Again—

> "The quantity of grain supplied should be in proportion to the amount of mash consumed; equal amounts of the two forms of food give the best results. When feeding upon wet mash, therefore, if the heavy breed birds be given 2ozs. of grain per day, they should be supplied with 2ozs. of the dry meals, given in a crumbly moist condition."

Now this again is misleading, for there is no reference made as to the composition of the mash. That the writer is without practical experience or practical knowledge is evident from the advice he gives in reference to the feeding of grain and dry mash.

He says:—

> "Start should be made with two ounces of grain per bird per day."

Whether he means the day should be started with two ounces or grain or not, is not quite clear. If it is so, we should recommend our readers not to follow the advice. For a heavy feed of grain in the morning results in a low consumption of mash throughout the day, and it is far better that the grain should be given as the last feed at night. Further, it should be regulated by the birds' appetite, and not by the consumption of mash.

Now let us take it that the amount of mash consumed daily by each bird works out at 2½ozs. According to the writer the grain ration should be altered accordingly, so that an equal amount of each class of food is provided. How is he going to arrive at this? If 2½ozs. of mash is consumed, would he give 2½ozs. of grain? On the contrary if the mash consumption dropped to 1½ozs. per bird per diem, would he give 1½ozs. of grain?

If he had had practical experience or practical knowledge, he would advise his readers to feed according to the appetite and condition of the birds, and not attempt to regulate the grain ration by the consumption of mash

Then he says:—

> The grain ration should consist of fairly heating foods, as it is this part of the total nutriment that goes towards the upkee of the body. There is nothing better during the winter than a mixture of equal parts of wheat and oats with a half part o kibbled maize. This gives a fairly broad ratio, as it is termed and one that is most suitable for the layers.

Practical experience of egg production during the winter months would have taught him that the best results are obtained when kibbled maize forms a very large part, if not the whole, of the grain ration.

Then we are told that a simple and inexpensive dry mash is made as follows:—Equal parts maize meal, middlings, broad bran, Sussex ground oats and meat meal, provided the last mentioned be of superior quality.

Now the point is that this is *not* an inexpensive dry mash. On the contrary, it is a most expensive one. The percentage of meat meal is very excessive, and no mention is made as to whether parts are by weight or measure, and surely the advice to use a larger quantity of fish meal than meat meal indicates how little knowledge the writer has of this subject. The average sample of fish meal has a much higher percentage o protein than an average sample of meat meal, and is more conducive to egg production than pure meat meal because of the lime phosphates. Of this there is not the slightest doubt, but the writer does not seem to be aware of the fact.

The curious part of the whole article, however, is contained in the remark that—

> "If the maize meal be reduced, and the broad bran increased it will be necessary to lower the quantity of animal food, a bran is not so heating as maize meal."

The logic of this passes comprehension, and it would be interesting to know exactly what the writer meant.

Following this we have a mash which is said t encourage egg production without in any way forcin the birds unduly: Middlings five parts, bran fiv parts, ground oats four parts, maize meal four parts and meat meal four, or fish meal five parts.

If this is not a forcing mash, I am afraid I am entirely ignorant of what is meant by "forcing" a far as feeding is concerned. It is to be noted that th parts are by measure—this is important. Let us pu these into weights, taking his measures as quarts We find we have:—

2lbs. Bran.
5lbs. Middlings.
4lbs. Sussex ground oats.
5lbs. Maize Meal, and if we use Fish Meal 7lbs. 3ozs., or Meat Meal 6½lbs.

To avoid any complications we will put the mea meal at 6lbs., and we find he is feeding approximatel 35 per cent., or if we take the case of the fish meal nearly 45 per cent. of the mash.

It is a pity the writer did not advise his readers t take care in feeding this percentage of fish meal tha the oil content did not exceed five per cent., for i would certainly have produced most unsaleable eggs.

A splendid mash for backward pullets is stated t be four parts (by measure) of middlings, two part maize, one ground oats, one bran and one of fish o meat meal.

(Continued at Foot of Column Next Page).

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

E. H. T. (Tenderden) asks, in reference to the rticle appearing in our "Dairy Show" issue on "The Egg and the Incubator," whether he should un one 150-egg Gloucester and no self-turning ray, a 60-egg Hearson with no self-turning tray, nd a 460-egg size Hebditchs at the temperatures ecommended in the article? With reference to he Gloucester and Hebditch machines—Yes. With the Hearson, if the bulb of the thermometer s right on the eggs, it would be advisable to run ccording to the maker's instructions. My correspondent then asks if he should merely turn the ggs in the Hebditch machine three times a day ntil the 18th day, and never open the egg drawer t all during the whole of the hatch, and not even o change over the eggs on outside edge into the entre. I want to make this perfectly clear. It s quite a different thing from opening the egg drawer to turn the eggs and put them back again han taking the tray right out and thoroughly cooling the eggs for a quarter of an hour or twenty minutes. In the first case they would quickly egain their temperature, while in the second it akes some considerable time, and there is the risk of chilling the embryo. It would not hurt the ggs if my correspondent merely opened the drawer and changed over the eggs from the outide row to the centre. In most cases it is an dvantage to do so, because there is variation in he temperature between the outside row and the entre. May I put it in this way? It is the difference between standing at your front door on a cold frosty night, and saying a hasty "Good-bye." and seeing your visitor to the front gate and taking twenty minutes to do so. In the one case you get a breath of fresh air, whereas in the second you get a chill.

G. W. N. (Bromsgrove) sends samples of food. The meat and bone meal contains too much bone, and too little meat. The mixed corn is good, except with regard to the whole maize, which should never be fed to fowls. The bran is just a fair sample. The sharps are too coarse, containing too much bran. I do not call them at all good. The maize meal is a good sample. He has 69 fowls, nearly all pullets; 30 pure Leghorns, March hatched, and others February, and mongrel pullets. One Leghorn laid five eggs in one week about three weeks ago, and now none at all. The birds are on free range, and the following mash given them in hoppers:—2 lbs. bran, 4 middlings, 1½ maize meal, and 5 per cent. meat and bone meal, and mixed corn. He does not feed the corn by weight, but at times checks himself up. They have one ounce per head in the morning, and two ounces at night, and unlimited cabbage. I think the feeding is wrong, and the sample of meat and bone meal is a very inferior one, the percentage of meat being too small. My correspondent should increase the maize meal by another half pound, and get a better sample of meat meal or meat and bone meal and bring it up to 10 per cent. The corn contains too much whole maize, but is otherwise good. Whole maize should never be fed to fowls. I think if these matters are attended to and a better sample of middlings used, there should be an improvement in egg production.

"B" (Stokesley) writes that he would very much appreciate advice as to why his birds are not eating their mash. The composition of the mash

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MODERN POULTRY FEEDING.—Continued.

We are told that—

> One good way of telling whether you are giving the newly-introduced pullets at least, too little or too much food is by the pelvic bone test depicted on the cover. These bones should have a liberal coating of fat, and if they haven't, you are not giving the birds enough food. On the other hand, if there is too much fat on them you are being **too** generous with the rations. Alter your feeding accordingly, and apply the "pelvic" test until you have arrived at the happy medium.

Now, how is a novice to know the difference between a liberal coating of fat and too much fat? If the condition of the bird is to be determined by the amount of fat on the pelvic bone, and the feeding is to be regulated by the percentage of fat, we think our writer has given his readers a nice little problem.

Let him take up 100 pullets, and see how the percentage of fat on the pelvic bone will differ, and attempt to regulate his feeding, so that they should all have a liberal coating, and none should have too much or none too little is :—4 cwt. bran, 8 middlings, 2 maize germ meal, fish meal 2 cwt. "B" did not send me samples, and when birds refuse the mash there is always some ingredient which may be the reason—an excess of oil in the fish meal would be a sufficient cause, and may lead to serious digestive trouble. On the other hand, there is the maize germ meal, which it is always wise to suspect should birds refuse the mash, as in cases where this is extracted by an acid it often tastes bad, and the birds refuse it. Will readers please note, who find their birds not eating the mash, that samples of all ingredients in the mash should be sent to me.

A. A. M. (Aldridge) asks the constitution of a forcing mash and also a good laying mash for ducks. The following would be a good forcing mash :—1 lb. bran, 1 alfalfa meal, 4 middlings, 1½ maize meal, ½ Sussex ground oats, and ½ meat and bone meal. The following would be a good mash for the ducks :—10 lbs. maize meal, 20 middlings, 5 ground oats, 5 bran, and 4 fish meal. Ducks soon foul the ground, but they apparently do not suffer from the effects of foul ground so quickly as fowls. With 240 square yards my correspondent might run 15 or 20 ducks. With regard to the other piece, 150 yards by 10 wide, Runners or Khaki-Campbells would be a more suitable breed. The Secretary of the Utility Duck Club is Mr. H. B. Carrington, Blacklands, Crowhurst, Sussex.

W. W. (N.18) wants to know the best wet mash for pullets now six months old, and to know when it is best to feed them—either in the evening or morning. If my correspondent is keeping the birds in the back-yard, it will be necessary to supply something in the nature of green food or as a substitute for it. A good mash would be:—1 lb. bran, 1 alfalfa meal, 4 middlings, 1 maize meal, 1 biscuit meal, and 1 meat and bone meal. To give variety, replace the biscuit meal with ground oats or even cooked potatoes. The grain feed should be three parts kibbled maize and one of wheat. The birds should not be given flint grit; it is useless. Give oyster shell or limestone grit, or even cockle shell; this is all that is necessary. Flint grit is simply wasted. My correspondent is wise in using Izal to keep his house clear of red mite.

H. S. F. (South Hayling) sends a moderate sample of meat and bone meal at 17s. Cracked maize at 12s., which is just fair. Between the two samples of middlings there is little to choose, but "A" is slightly the better. The alfalfa meal at 14s. is a really excellent sample. The maize meal just average quality. Ground oats at 13s. are good value for the money.

POST-MORTEMS.

H. T. N. In reference to the W.L. pullet forwarded alive, the swelling on the leg was due to injury to the blood vessels, it being full of coagulated blood and serum. I removed this and dressed the leg, and to-day it seems quite comfortable, but it remains to be seen whether or no the tendon sheaths have shared in the trouble, and how the wound behaves. This might have been caused, of course, by the leg ring having been caught up in something, but that is merely speculation. The eye trouble is glaucoma, the cause of which is not known, but it has been known to follow feeding on mouldy food and on "gassy" roots. There is unfortunately no effective treatment. I will advise you further as to how the pullet progresses, and will send her home if she recovers.

C. H. S. The post-mortem examination of the W.L. pullet showed that she was extensively affected with gout, the kidneys being completely blocked, the pericardium loaded with urates, and the viscera heavily "peppered" with the same. The diet is, of course, at fault, being too rich in proteins, and will need considerable modification in this respect. As the trouble seems general in this particular flock of pullets, I should advise treating the whole of them; starve for 24 hours, and then give a small mash containing 11 ounces of Epsom salts for every 100 birds, feed very lightly, omitting all forms of animal food, and mostly on grain and green stuff, the latter in abundance. In the drinking water place 10 grains of the salts per bird for a week or ten days, according to their response—i.e., in improvement or otherwise—but any that show similar symptoms to this bird should receive a further purgative dose of 35 to 40 grains, administered for preference with a syringe and rubber tube passed directly into the crop. I have found in treating really bad cases of gout that a compound cathartic pill, commonly known as a No. 9, have given excellent results, even better in these cases than the salts, but the latter should invariably be given in the drinking water, whichever preliminary purgative is selected.

A. B. C. I dispatched the bird to you this afternoon, as she was apparently quite recovered, eating well, etc. Since last writing the swelling on the wattle became greatly enlarged, and was found to contain a large mass of necrotic material, which was removed, the wound healing rapidly. Although I was unable to demonstrate the causative organism, I am convinced that this trouble is what is known in Australia as contagious oedema of the wattle, and which is said to be caused by a local infection by the same bacillus that causes cholera. The germs enter by minute breaches in the skin covering the wattles or head ornaments,

(Continued at Foot of Column Next Page).

A Year on a Poultry Farm.

By Lieut.-Colonel J. MACRORY, D.S.O.

CHAPTER III.

We left the chickens safely ensconced beneath their hot-water brooder. They started existence beneath the first coil of pipes—the one nearest the stove. At the end of a week this brood was induced to move into the next compartment, where it encountered exactly similar conditions, except that the coil of pipes was some two inches higher from the ground, and a shade cooler in temperature. In this compartment a dry mash hopper was provided for the first time. At the end of the week the second brood, arriving from the incubators, took up the quarters just vacated by the first lot. And thus the scheme progressed until the fifth and last compartment was filled with month-old chicks, and each preceding compartment with chicks a week younger in every case.

To compensate for the gradual rise in the coils of heating pipes, slatted platforms were used of gradually increasing height under the hovers of each compartment except the first, where a low wire platform formed a mattress for the "tiny wees."

The chicks never set foot on mother earth until they reached the fifth compartment—in other words until they were four weeks old. After a week in this compartment the young birds were drafted out in batches of sixty to "Ardmore" coops, where a sacking hover, three feet square, replaced the hot-water pipes, and where the chicks had free range on a grass field.

This scheme of rearing is excellent in its automatic simplicity and labour-saving qualities, and many of the broods (especially the early ones) did excellently. Other broods, however, were not a success, and lost heavily day by day. There was no apparent reason to account for this, so that I fear I must put it down to one basic fact, viz.:—Rearing in large broods of a hundred and over is a very chancy and uncertain business. The large numbers certainly make for labour-saving methods, but may not this cry of labour-saving be very much overdone in the chicken world? Personally I have come to the reluctant conclusion that it probably is.

I say *reluctant* conclusion because no one objects to labour more than I do. But I fear that there is no escape from labour, as far as the chicken rearer is concerned, and for next season I am going to see if I can put in a little more labour and rear a few more chickens by experimenting with the small flock systems of fifty to sixty chicks in one brood, as compared with the larger flocks of a hundred to three hundred.

It happened during the spring of 1925 that the human brood was absorbing all the milk produced by the two cows kept on the farm, so that the chickens perforce did without this article of diet. This, again was, I think, a mistake. Milk for young things is so valuable that I am sure it should always be supplied in one form or another. Milk powder is very useful, but it has gone up to an extortionate figure, following the law of supply and demand. At over £40 a ton I refuse to buy it, as a protest against the way in which its price has been advanced directly the demand for it sprang up amongst poultry-keepers. I think, however, I have at last found a very efficient substitute in the form of semi-solid buttermilk. This is a Yankee production, and the literature about it is most edifying, and not devoid of humour. "Say, brother, this is some dope! Reckon you'd best rush me on a car load or two."

I wish some *British* manufacturer would take up the manufacture of such an article.

This semi-solid buttermilk is claimed to possess all the virtues which the advocates of sour milk claimed for the latter some ten years ago. As far as I remember, the Bulgarians invariably lived to a ripe old age simply through drinking sour milk.

This sounds conclusive, but then the Scotchman lives almost invariably to an equally ripe old age, and he drinks nothing but whisky. Probably the malt in whisky has something to do with this. In any case, I candidly admit that *I* would rather drink whisky than sour milk—but tastes differ.

To revert to this matter of rearing (or attempting to rear) chickens in large broods. We noticed last season in particular how very differently nearly every brood fared in its struggle for existence. This difference began at a very early stage—in fact in the incubators. Some lots hatched well, and did well.

Others hatched badly and did badly; others, again, hatched well and did badly, and still others hatched badly and did well. There seems no rhyme or reason in it. The only moral I can draw from the whole thing is that it is safer not to put too many eggs into one incubator, or too many chicks into one brooder. In other words, the "small unit" applies to the incubator as well as to the brooder. I have had a good deal of practical experience with at least four of the leading makes of incubators, and I have always found the medium size, i.e., sixty to a hundred egg capacity machine, to be much the most consistent in its results.

Once our chicks got into the Ardmore coops they usually did remarkably well after the first few days. The cold, wet weather was, however, much against them, and eventually a large proportion of them developed a disease, at which I have hitherto sneered as unworthy of a place on any decently-run modern poultry farm—to wit GAPES. I treated this with

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POST MORTEMS—Continued.

their entrance being followed by a local reaction (swellings and death of tissue). It is believed that contagion takes place more from contaminated ground than directly from bird to bird, the wattles becoming infected by their dragging over the ground when feeding, picking about, etc. I must admit that the eye lesions are not unlike those of eye roup, and it is an interesting speculation as to how often the so-called eye roup is in reality due to this trouble.

contempt at first, but the chickens got no better, and some began to die of it, so we at last sat up and took notice. It seemed perfectly useless to start disinfecting a four-acre field, especially as this adjoined our large ancestral rookery, and the rooks had become bosom companions of the chickens—especially at feeding time. The Department of Agriculture inform me that nearly all wild birds, and rooks in particular, are carriers of the gapeworm, so the case seemed pretty hopeless. We tried salicylate of soda squirted down the throats of the worst cases with a fountain pen filler, but I don't know that it did much good. The healthy chickens usually recovered in any case, and we tried to hope that the others were better gone. Miss White (that you may remember is the *nom-de-plume* of my lady pupil) informed me lately that this season is the first for years in which her mother's chickens have been free from gapes. Miss White attributes this to the systematic addition of a few drops of Izal to their drinking water. This is very interesting, and, I hope, it is true, for it is a cheap and simple remedy.

The worst of half these remedies you read about is that they involve such enormous trouble that I think I prefer the disease. When I read instructions as to swabbing a bird's eyes with tincture of aconite or essence of ginger, and, in addition, wiping its nose with your best pocket-handkerchief, I go wild. *Is* the bird worth it? Then, even if all else fails, you are told to kill and BURN the bird. The first part is all right, but I have never yet met anyone who could tell me how to burn an incombustible thing like a fat old hen. What sort of a fire do you burn it in? There would be trouble in this household if I tried the experiment in the kitchen, or even the drawing-room fire. I do not run a private Woking, so I content myself with digging a hole and shoving the corpses in the ground—the very thing which I am told ON NO ACCOUNT to do. Has anyone ever really burnt a hen? I appeal to Mr. Newman. Is he allowed to burn a hen in his kitchen, or sitting-room fire? Perhaps he did it last year, but I am sure he does not do it now.

Anyhow, I cannot burn hens. I can make a devil of a smoke, and a splendid temporary blaze, by dint of a shilling's worth of parafin *and* the hen, but a great deal remains after the smoke and shillingsworth have disappeared.

Perhaps if I bought a pound's worth of parafin I might burn a hen: but I can't afford to try.

We will now wait, in burning patience, for the fourth instalment of this truly fascinating article.

(To be Continued).

Correspondence.

MARKETING OF ENGLISH EGGS.

Sir,—Mr. Morris Hammond has written a very interesting letter on the above subject in your issue of October 21st, and I think most of us who are large producers will agree with what he says, except that in my opinion he rather exaggerates the difference in price between the best English and best foreign eggs as quoted in the papers; usually the difference for 1st grade eggs is about 2s. per long hundred, but the foreign price is for a guaranteed 18 lb. egg, whereas the English eggs as commonly sent to Smithfield would certainly not average more than 16 lb. per 120. Often the difference in price is the other way round. For instance, to-day's (October 22nd) quotation in "The Times" is: English 28s., Dutch (18 lb.) 26s. 6d. I feel sure also that very few producers of good quality clean eggs in large quantities, accept the quoted price, there is no difficulty in getting a premium.

Few of us, I think, will agree with Mr. Hammond that it is worth making four grades. The extra time taken practically cuts up the small extra price obtainable, and the small number of $2\frac{1}{4}$ to $2\frac{1}{2}$ ozs. are hardly worth the trouble of keeping in separate cases.

I thoroughly agree with his remarks about Co-operative Societies' prices. I belong to one society, and some years ago, in order to support them, I sent my eggs to them for a short time, but certainly never averaged more than middle London price, and, roughly speaking, I lost about 2s. 3d. per 120, taking all grades into consideration.

I have before me the contract Mr. Hammond mentioned in his last paragraph. This contract is, in the firm's attached letter, said to have been drawn up in consultation with a large producer, who apparently quite self-appointed has negotiated for the other producers, and is now, so their letter says, their "technical expert on eggs," whatever that may mean.

In the first place, this gentleman's efforts can hardly be considered unprejudiced if the firm were giving him a job after the form of contract was settled. In the second place, during over thirty years of business life, I have never before seen a contract where both buyer and seller had an equal voice in the settling of terms, in which the seller's interests were so poorly protected, and where the buyer had so thoroughly safeguarded himself. I very much doubt if any farmer who is selling eggs on this contract will be in any great hurry to renew it next year.

The only fair way would have been a meeting between the director of the firm and a representative deputation of some of the large producers who intended selling to the company concerned.

(Continued at Foot of Previous Column).

Those producing eggs on a large scale will have to be wary or they will find this is the thin edge of the wedge, and they will be pinched in exactly the same way as the milk farmers have been by the combine.

I do not sign my name, as for business reasons I do not wish to become a marked man, but I hope Mr. Newman is satisfied as to my bona fides.

I am, Sir, "BEWARE."

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

SOMETHING WONDERFUL

Is the increase in the membership of the ;.P.B.A. In September we enrolled 286 new nembers, beating all earlier records for that nonth, but in October we smashed all previous re:ords, no fewer than **413** fully paid-up new mem›ers being enrolled. I say fully paid-up, because ve distinguish between these and the members of .ffiliated societies. Then we have not been out nto the highways and byways to obtain members, ve have simply got on with the work, and they ıave come to us, either by the recommendation of ıld members or because they recognise that the ;.P.B.A. is doing something for the industry, and hey are likely to benefit directly or indirectly. Ve are busy at this office at the present moment, 'he Food Scheme, of which I shall have more to ay later, entails an enormous amount of corespondence. Someone (not a member) came to ıe at the Dairy show, and remarked that in the ourse of three years we should have our 10,000 ıembers. Now this particular person doesn't ltogether like the S.P.B.A. for reasons into vhich I need not enter, and his concluding remark vas, "Well, I don't like your darned S.P.B.A., ut I must admit it does things and gets things one." Well, if we don't lose out heads, we will ave those 10,000 members, but the best way to et them is to get on with the work, and let them ome on their own initiative. We haven't the time o go fishing for them. Meantime we want the elp of all our present members, with suggestions, leas and **constructive** criticism.

FOOD PURCHASE SCHEME.

The following foods can be supplied in 5cwt. lots and pwards, of one kind. Free on rail:—

Sussex Ground Oats ...	**London**	**12/6**
,, ,, ,, ...	**Sussex**	**12/9**
,, ,, ,, ...	**Bristol**	**12/3**

All these are guaranteed of the best quality, and are ısurpassed at the price.

Fish Meals (Pure White)	**19/3**	**F.O.R.**	**London.**
,, ,, ,, ,,	**19/6**	**F.O.R.**	**Swansea.**
,, ,, ,, ,,	**19/3**	**F.O.R.**	**Tynemouth.**
,, ,, ,, ,,	**19/9**	**F.O.R.**	**Grimsby.**

Fish Meal with 2 per cent. oil content not at present available.

All in lots of not less than 5cwt. Free on rail. rimsby, Tynemouth, Swansea, and London. The ird sample at 19s. 9d. is the exceptional sample to ıich reference was made in the Dairy Show number; e other samples conform to the standard fixed by e Fish Meal Manufacturers' Association, and are ıaranteed not to contain an excess of salt or oil.

Quotations for ton lots can be obtained on application to this office: —

Meat Meal: 15/9, Carriage Paid.
Meat and Bone Meal: 15/9, Carriage Paid.

Particular attention is called to the quality of the Sussex Ground Oats, and the Fish Meal. It is anticipated that the above quotations will result in the general reduction in the price of Fish Meal and Grains.

Members will please note that not less than 5cwt. of any one mash can be supplied.

The S.P.B.A. mashes can be supplied from the centres given below at the prices quoted. Will members please understand that quotations for meals and grains of every kind can also be sent from the centres on application to this office.

Members will greatly assist us if from time to time they will send us samples of mashes and meals bought by them through the scheme, so that these may be checked and the highest possible standard maintained.

All prices quoted are subject to market fluctuations. It is hoped to make further announcements in due course.

PRICES OF MASHES. Per Cwt.

	Layers.	Growers	Breeders.
F.O.R. LIVERPOOL	**11/3**	**11/3**	**11/0**
F.O.R. LIVERPOOL	**12/3**	**12/3**	**13/3**
F.O.R. LONDON	**11/3**	**10/9**	**11/9**
F.O.R. LONDON	**11/6**	**11/6**	**12/0**
F.O.R. LEITH	**10/9**	**10/6**	**11/9**
F.O.R. LEICESTER	**11/0**	**11/0**	**11/9**
F.O.R. KING'S LYNN	**11/6**	**11/6**	**11/9**
F.O.R. BELFAST	**12/9**	**12/3**	
F.O.R. BRISTOL	**11/9**	**12/0**	**12/3**
F.O.R. SOUTHAMPTON ...	**11/6**	**12/0**	**12/0**
F.O.R. PLYMOUTH	**12/6**	**12/9**	**12/6**
F.O.R. TEWKESBURY ...	**12/9**	**12/6**	**13/0**
F.O.R. ABERDEEN	**12/3**	**11/9**	**13/9**
F.O.R. HARROGATE	**12/6**	**12/6**	**13/6**
F.O.R. GLASGOW	**12/9**	**12/8**	
F.O.R. STAFFS	**11/6**	**11/6**	**12/6**

CRYSTAL PALACE—
THE GRAND INTERNATIONAL

Much as one enjoys the Dairy Show, from many points of view the Great Show at the Crystal Palace which opens next week makes a stronger appeal to the poultry-keeper. To begin with, one sees birds under much better conditions, there is no crowding of either birds or people. The light is all that can be desired, there are not the counter attractions of the Dairy, nor the rush; it is a more leisurely affair. This year it will be a greater show than ever, for wiser counsels have prevailed, and we are to have only two great shows in London, and two are quite enough. Olympia has been abandoned, or perhaps it would be better to say that the two have joined forces. **We shall hope to welcome a large number of our members at the S.P.B.A. Stand,** where, as usual, we shall have much to attract, and I hope to make some further announcement with regard to the Food Purchase Scheme, which will be of interest and importance.

The date of the Show is NOVEMBER 17, 18, 19, and we want to welcome you all at our Stand. The President and members of the Council will be in attendance.

THE MIDLAND FEDERATION.

Mr Brain asks me to say that the Federation will be pleased to receive applications from poultry specialists who are capable, and will give lectures on various subjects appertaining to poultry at their festival on January 7th, 8th and 9th next, in the Bingley Hall, Birmingham. Early applications are requested. Usual terms and expenses will be paid.

I am also asked to correct a mistake which occurred in our report of the final scores of the Midland Laying Test in October 28th issue. After each section the words five birds appear. It should have read four birds, which is the number competing in each pen.

I regret this mistake as, of course, it is calculated to give a very wrong impression of the birds' performance.

FOWL POX.

I have received the following letter from Mr. Douglas Ansell, written from Kalaw, Burma, in reference to treatment of Fowl Pox and Roup :—

> "Dear Sir,—I have been interested in the articles appearing in 'Eggs' relating to fowl pox and roup. My experience out East is that fowl pox is a seasonal disease. In the plains of India it always arrives at the beginning of the hot weather, that is when the Loo or hot westerly winds commence to sweep across the country, and only those who have experienced it can know how unpleasant it is. I have found it impossible to cure birds under two months old with any certainty, but birds over this age I have never failed to cure, whether it be of the confluent or the dry type. The treatment employed is very simple. Make a mixture of 2½ ozs. sulphuric acid, 2½ lbs. copper sulphate, 18 gallons of water. Give them this and nothing else to drink, and also dip their heads, comb, wattles and all, well into this mixture, keeping them well submerged until they begin to strangle. I had over 100 cases this year, and cleared the lot in a month without any isolation or segregation. I may be telling you stale news, it is a common treatment in India, but to any who have not tried it, my advice is 'Do so.'"
>
> Yours truly,
>
> DOUGLAS ANSELL.

STRAW HOUSES.

I do not wish to make any comment upon these, but the numerous letters which have been received will suffice to acquaint our readers with the general attitude towards them.

Might I, however, state that no plea was ever made that they were perfect, and that it would be far better to try and rectify the imperfections than to condemn the whole houses because of them. These little difficulties which have been suggested in the correspondence are not so dreadful that they may not be overcome, and we are too ready to condemn anything new because of some imperfection, either fancied or real, rather than try to remove it. I hold no brief for the straw hous but my experience in the poultry industry has bee that many things have been condemned befor they have been tested.

THE KEIGHLEY AND DISTRICT BRANCH.

Mr. Frank Snowden presided over the Monthly Meeting hel in the Temperance Hall, Keighley, on Wednesday, Novembe 4th. There was a good attendance. Minutes of previou monthly meeting were read, passed, and signed. Six ne members were elected to membership to the branch. Afte accounts had been passed for payment and correspondence rea a discussion took place on matters relative to poultry-keeper in general, and members of the S.P.B.A. in particular. M Snowden particularly pointed out the advantages to the smalle of poultry-keepers in being a member of a Poultry Society. was announced that the prize distribution of cups, medals, an certificates won in the Yorkshire Federation Laying Tria would take place at Leeds on November 28th. Mr. Snowde invited all members to attend. As soon as all arrangemen are made members will be notified by the Secretary.

Mr. P. A. Francis, Poultry Commissioner to the Ministry Agriculture, will give a lantern lecture after the distribution prizes. Several members brought their entries for the Show and Mr. Snowden appealed to the other members to suppo the Show and send their entries in as early as possible.

THE LANCASHIRE UTILITY POULTRY SOCIETY.

INTERNATIONAL EGG-LAYING TEST, 1924-5.

Twelfth Month (August 22nd to September 18th) and Final Repo

During the last period the birds continued to give a go average yield of eggs, some of the heavy breeds beginning pull up after a slight rest.

Moulting was not very heavy, and the health of the flo was good

As soon as the test was ended, the birds were despatched their respective owners as speedily as possible.

The following is a list of the leaders in each section. Figur are Eggs and Points respectively):—

Large Breeders. Section I., White Wyandottes, 10 Pullets. W. Crabtree, Twiston, Clitheroe, 2011, 2129 (winner of the Wrennal Challenge Cup); Frank Snowden, Cowling, 1988, 2101; Marshall, Forton, 2114, 2070.

Section II. Rhode Island Red.—J. R. Hull, Thorton, 1755, 1 (winner of the A. T. Walker Challenge Cup); G. H. Myerscoug Grimsargh, 1966. 2036; Mrs. Molloy, Crumlin, Ireland, 1892, 1942.

Section III. Any Variety, Heavy.—F. W. Welch, Bewdl (L.S.), 1977, 1896 (and the Frank Horsburgh Challenge Cup); Jamieson, Broughton (Barn.), 1660, 1826; W. B. Bradley, Brought (L.S.), 1675, 1773.

Section IV. White Leghorns.—Frank Snowden, Cowling, 20 2226 (and the J. Collinson Challenge Cup; also winning 1st pr over all other breeds in the Large Breeders' Section); Allen Bro Harrogate, 2230, 2272; J. Thompson, Shrewsbury, 2153, 2215.

Section V. Black Leghorns.—R. Rodwell, Nelson, 2058, 2030 (a the F. Toulmin Challenge Cup): G. B. Metcalf, Lechlade, 1965, 20 Stanley Street-Porter, Ely, 1845, 1952; W. Hammett, Blackp (A.O.V., Light, 1720, 1857 (winner of the W. Hammett Challen Cup).

Section VI. Small Breeders. Five Pullets.—J. W. Lodge, Hol firth (W.W.), 1127, 1192 (and the Tom Gardner Challenge Cup); H. Sefton, Rufford, 1036, 1093; J. J. Rawlinson, Brindle, 1036, 109

Section VII. Rhode Island Red.—T. Lumb, Hebden Brid 1048, 1071 (and the H. Sutton Challenge Cup); G. E. Marsde Lostock Hall, 1037, 1050; W. Lyon, Holmeswood, 914, 950

Section VIII. A.O.V., Heavy.—T. Rossall Sandford, Shre bury (L.S.), 959, 1003 (and the Rainsford Challenge Cup): G S. Sandbach, Abergele (L. S.), 800, 813; W. J. King, Leamingt Spa (Aus.), 744, 723.

Section IX. White Leghorn.—F. F. Fisher, Tarleton, 1153, 1 (and the H. Sutton Challenge Cup, the Tom Barron Challen Troph, the Reg. Walmsley Challenge Cup, confined to t Society's members); J. McKechnie, Tarleton, 1124, 1209; G. W. S cliffe. Hebden Bridge, 1185, 1158.

Section X. Buff Leghorns.—W. A. Lansley, Whitchurch, Sal 1050, 1228 (and winner of the W. B. Bradley Challenge Cup: a the F. Walsh Cup); J. Hodgkinson, St. Ives. Cornwall. 892, 10 C. Rawlinson, Wavertree, 975, 976.

Section XI. A.O.V. (Light).—G. Mart, Longton (An.), 909, (and winner of the T. Parker Challenge Cup); Eliz. Priestl Oxford (An.), 887, 902; J. B. Porter, Fleetwood (W. M. Dais 823, 881

Section XII. Single Bird (Heavy).—J. R. Hull, Thornton (Rho Island Red), 240, 272 (and winner of the Frank Snowden Challen Cup)

Section XIII. Single Bird (Light).—S. and J. Parsons, M bury (W.L.), 243, 266 (and winner of the Edmunds McCurdy Ch lenge Cup).

Section XIV. (Heavy).—Miss Walker, Hothersall (W.W.), 1057: W. Ellwood, Galgate (R.I.R.), 931, 915; R. Hargeaves, Bart (W.W.), 963, 925.

Section XV. (Light).—W. Ellwood, Galgate (W.L., 1116. 1 A. V. Wallis, Oxon (W.L.). 1057, 1073; R. Bradley, Hutton (W 1021, 1040.

CHARLES E. NUTTALL, Manager

Income Tax and Poultry.

The important case heard in the Scottish Courts, the report of which was published in our last week's issue has aroused so much interest that we are publishing below the opinions of the Judges on the stated case.

Great credit is due to the Scottish National Poultry Council, who successfully fought the case against the Income Tax authorities.

We are confident that poultry-keepers throughout the whole of Scotland will recognise the good work the Council has done for them, and should give it their fullest support.

EXCHEQUER CAUSE.

OPINIONS OF THE JUDGES OF THE FIRST DIVISION
on stated case
for FREDERICK Q. LEAN and another
against E. A. BALL, H.M. Inspector of Taxes.
27th October, 1925.

LORD PRESIDENT (Clyde):—It appears from the Stated case that the appellants are tenants of land extending to 33 acres. The land is equipped with a house and with farm buildings, and the appellants, who carry on upon these lands the business of poultry rearing and poultry-keeping, have themselves erected on the lands a considerable number of poultry houses in which they keep what I may call a permanent stock of about 1,000 birds. They also keep upon the 33 acres a stock of some 46 sheep, and these and the poultry make use in common of the land less indeed a small part amounting, I understand, to about half an acre, which is cultivated in order to produce a stock of green food which can be fed to the poultry along with other food no doubt during the winter. The appellants have also erected a tomato house of moderate size, and they grow tomatoes in it. They were assessed on the profits of the business which they carry on upon these lands under Schedule D, and their case is, and has all along been, that they are not properly assessable under Schedule D, but ought to be assessed under Schedule B in respect of their occupation of the lands which I have described. The argument presented against them by the Inspector of Taxes upon their appeal is stated in the case in perfectly absolute terms. It was that the appellants carried on a trade or business assessable under Schedule D. and that poultry farming did not fall within the term "husbandry" in Schedule B of the Income Tax Act, 1918, and the decision of the Commissioners is stated in an equally unqualified way. They say that they were of opinion that the term "husbandry" did not include the use of land for the purpose of poultry farming. I do not want to run the risk of doing any injustice by putting too much stress upon the very unqualified terms which apparently both the argument and the decision were given. The question which the appeal raises is of a kind which may be of frequent recurrence, and any decision which we give may be of somewhat extensive application, because it is common knowledge to everybody that during the last few years, and particularly at the present moment, the number of people who are carrying on the kind of trade or business which the present appellants are carrying on has greatly increased, and the amount of land which is devoted either exclusively to the business of poultry-keeping or poultry rearing, or, as here, mainly to the business of poultry rearing; has greatly increased, and for that reason I have endeavoured to state as clearly as I could do at the opening of what I had to say exactly what are the circumstances alleged here.

My Lords, there have been a number of cases in which the interpretation of the word "husbandry" as occurring in Schedule B has been the subject of consideration. I think it may be extracted from them that lands are properly said to be occupied for husbandry if the trade or business carried on by the occupier of such lands depends to a material extent on the use of the fruits, artificial or natural, of the lands so occupied. I say to a material extent because it is notorious that there are many ordinary farms, as regards the nature of their operations, in this country which depend for the successful conduct of those operations to a very large extent on imported food or imported things which are not produced on the land at all, but which the extent of the farm would not enable them to produce. But I think that while the use of the fruits of the land in the trade or industry carried on upon the land is vital to bring that trade or industry within the description of husbandry, I think it is enough—I am speaking generally—if the use of those fruits is to a material extent, to a material degree, used and necessary for the operations carried on upon the land. In the present case it seems to me impossible to say on the facts alleged that the business of poultry-keeping and poultry rearing carried on upon these lands does not depend to a material extent upon the fruits of the land. It is quite evident that the lands are ordinary grass lands. It is quite evident that the extent of the provision of winter foods, the share, be it small, or green food which is fed to the poultry in winter, is produced upon this land. I think one must take it as common knowledge that poultry kept upon grass lands, just like pheasants while they are being reared, are no doubt to a very large extent dependent on food artificially fed to them and not produced upon the land at all, but on the other hand to a very material and important extent, when one has regards to their growth and development, on the grass above it, to some extent on the crop and on the seeds and what not. Therefore my Lords, having regard to the facts in this case, I arrive at the conclusion that the judgment of the Commissioners was wrong, and that we should decide the case accordingly. But I wish to guard myself from the possibility of being supposed to lay down as an absolute or general rule that poultry-keeping or poultry rearing is in all circumstances an agricultural operation or a branch of husbandry, for it is not difficult to imagine cases in which the occupation of the land for that purpose had, let me say, to take an extreme case, no relation at all to the fruits produced upon the lands. Well that would present a very different question for determination. but I am happy to think that we are not driven to a conclusion which I think Mr. Skelton was disposed to rather drive us if he could, namely, that such a poultry farm as this is not and cannot be husbandry, especially if there were any idea that a decision of that sort were to result in breaking up the business of very many farms into two kinds of business, one of agriculture and another of poultry-keeping on the analogy of the stallion case.

LORD SKERRINGTON:—I agree with your Lordship, and I wish to add that, in my opinion, "prima facie," what is popularly known as a poultry farm consists of, or at any rate includes, land which is occupied for the purposes of husbandry. There may, of course, be exceptional cases where that is not so, but I find no exceptional circumstances set forth in the stated case which lead me to think that the appellant's poultry farm does not fall within the description to which I have referred.

LORD CULLEN:—I have come to the same conclusion as your Lordship in the Chair. I proceed on the footing that the case involves an area of ground occupied not of the character merely of a poultry yard, used for housing, for artificially feeding and affording exercise for poultry, but where the poultry derive their sustenance to a material extent from the produce of the ground.

LORD SANDS:—I am of the same opinion. The question does not arise here whether a mere stance which is used for the purpose of keeping poultry is to be treated as a place of husbandry. I do not think I would have much difficulty in answering that question. Our question is a different one. It concerns a considerable area of ground, the occupation of which for the keeping of poultry is in accordance with the general rural understanding to be regarded as a form of farming. Now I quite agree with the view that in order that this may be accounted as husbandry there must be contribution by the lands as grass land to a material degree either to the nourishment or to the health of the poultry. But, of course, I quite agree that one might put it generally that it must be the fruits, and I think the fruits must be liberally construed, and the insects which are only found in grass land must be regarded as part of the fruits of that land.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

APPLICANTS FOR MEMBERSHIP.

Leech, E H., Paines Corner Farm, Broad Oak, Heathfield.
Ellis, R, Oakfield Road, Gosforth, Newcastle-on-Tyne.
Tremlett, P. M., Oakleigh, Billingshurst, Sussex.
Woodford, A. W., Henthorn P.F., Clitheroe, Lancs.
Summers, W., London Road, Wollaston, Northants.
Willis, W., Bottom Farm, Mapledurham, near Reading
Jones, J. Skidmore-, Cromer House, Halesowen, Birmingham.
Key, W., Langham Road P.F., Boxted, Colchester, Essex.
Saunders, C. F., "La Casita," West Street, Minehead, Somerset.
Watson, R. F., 2, Mansfield Terrace, York.
Sanderson, W., Manor House, Hutton Cranswick, E. Yorks.
Scott, H, 35, Hugh Mill, Waterfoot, near Manchester.
Flower, L. J., Brockhills P.F., Horde, Lymington, Hants.
Byres, A. B., Beresfield P.F., Takeley, Essex.
Chapple, S. C., Wyteleafe, Wickford, Essex.
Gammidge, H, 69, Silver Street, Barnetby.
Edwards, Miss B., The Grange, Bembridge, Isle of Wight
Graham, J G., Burn of Rhoda, Strachan, Banchory, Kincardinshire.
Barr, W., Strathdale, East Kilbride, Lanarkshire.
Hughes, —, Penn Manor, Wolverhampton
Thwaites, M, 1, Lower Row, Southfield, Nelson.
Leyde, Miss M. E., Netherwood, Dirleton, East Lothian.
Tuckwell, H G., 53, Commercial Road, Talywain, Monmouthshire
Deakin, R. H, Tucker P.F., Bomford, Derbyshire.
Crabtree, W, 16, Holderness Street, Todmorden, Yorkshire.
Kingsbury, W. H. (Junr.), Granville Terrace, Burnham-on-Crouch.
Crowther, O. C, 24, Manor Row, Low Moor, Bradford.
Snelgar, W. W., Nash Grove Lane, Wokingham, Berks.
Hatch, A. G, 3, Wellington Terrace, Drayton, Cosham, Hants.
Markham, Mrs. G H., Fordy, Soham, Cambs.
Price, S., Greenhill Lodge, Blackwell, near Bromsgrove.
Morton, G H., 'New Acres" P.F., Althorne, Essex.
Cochrane, Mrs. G., Sycamore P.F., Far Forest, near Kidderminster.
Minn, Miss C. C. Mac., Brierley House, Sheepbridge, near Chesterfield
Beech, H., 193, St. Lawrence Road, Tinsley, Sheffield.
Jones, W., Black Dyke Farm, Heptonstall, near Hebden Bridge.
Reader, J., Sunny Dene, Newmarket Road, Fordham, Ely.
Broadbank, E. A, The Bungalow, Laverstoke, Whitchurch, Hants.
Bateman, A., "Sunnyholme," Claremont Road, Derby.
Wilson, Miss M., The P.F., Chirk, Wrexham, N. Wales.
Cowan, J. T., Greenside P.F., Cumbernaul Station, Dumbartonshire
Heatley, Miss H H., Friston, Eastbourne.
Govier, T. J., Veryards, Cullompton, Devon.
Miller, P M., Harpford, Sidmouth, Devon.
Dunn, Major W. B., The Brambles, Yateley, Hants.
Bergen, Mrs. Van Ferney Hall P.F., Onibury, Craven Arms, Shropshire.
Garvie J. Mac. Greenknowe, Monkton, Ayrshire.
Frost, E. W., Huntow F, Bridlington.
Oldham, H., 1, Albert Road, Hyde, Cheshire.
Green, I H., 14, Tindal Street, North Reddish, Stockport.
Dixon, Miss M., Wellesbourne School, Acocks Green, Birmingham.
Hughes, T. G., "Startforth," Medburn, near Ponteland, Northumberland.
Countess of Castlestewart, Old Lodge, Nutley, Sussex.
Wathen, G. W. D., The Hawthorns P.F., Tadley, Basingstoke.
Miles, G J., The Retreat, Albury, near Guildford, Surrey.
Whitehead, J., 4, Gib Lane Head, Honley, Huddersfield
Nevin, W. T., Chapel House Farm, Broad Street Common, Guildford.
Walters, J P., Rowland's Farm, Lingfield, Surrey.
Jackman, W. T., Homeville, Devonshire Lane, Jersey.
Stevens, W H., 41, Buckingham Street, Leicester.
Baldwin, E C., Woodham P.F., South Woodham Ferrers, Essex.
Wardrop, W., Rosneath, Yateley, Hants.
Gant, H., 55, Cholmley Street, Hull.
Learoyd, J G., Dunelm, Papplewick Lane, Linby, Notts.
Unwin, L C., Loppington, Commercial P.F., North Shropshire.
Thomas, E, The Bungalow P.F., Colbury, Hants
Grantham, J., The Jungle, St. Ives, Hunts.
Jackson, J, Lock's Lane, Pilsley, Chesterfield.
Bolitho, W. L., "Ferulea," Whittingham Lane, Goosnargh, near Preston.
Chadwick, R., Carr Croft Farm, Birtle, Bury
Tidswell, T. (Junr.), Keighley Road P.F., Cullingworth, near Bradford.
Barker, H., Brooklands, Cullingworth, near Bradford.
Ingram, A. L., Gailey, Stafford
Fairweather, D. P., 74, Railway Street, Hebburn Colliery, Hebburn

UTILITY DUCK CLUB.

A general meeting of the above club will be held in Room 4, at 11 a.m. on Wednesday, November 18th, at the Crystal Palace, with a view to discuss the problems of the industry and the policy of the club, for which there was no time at the annual general meeting at the Dairy Show.

It is hoped that as many members as possible will attend

HARPER ADAMS' AGRICULTURAL COLLEGE, NEWPORT, SALO

POULTRY LAYING TRIALS, 1924-25.

Final Report.

The trials terminated on the 2nd inst., the leading pen i each section of the Championship and Small Flock Trials at th end of the eleventh period maintaining its lead up to the clos There are one or two changes in the other positions, notabl in the Wyandotte Section, in the which the second and thi awards go to pens which established their position only in th last month Pen 79 (D. W. Gunston) takes the award for th best pen in the Small Flock Trials. This pen has done consi tently well, the egg average for the pen being 231 eggs per bir It is worthy of note that in only three sections out of nine th leading pen in the early months finished in the leading position

The final average is a fraction over 181 eggs per bird, whic shows that egg production has been maintained at a fairly hig level.

The following is a summary of the leading pens, with th medal winners in each section:—

SUMMARY OF THE LEADING PENS.

Championship Trials.

Section 1. Light Breeds.—A. White (B.L.), Malpas, Cheshir 2080 (College Shield and Gold Medal); Miss N. H. Bell (W.L.), Ign ham, Kent, 2102 (Silver Medal); H. Sutton and Sons (W.L.), Pre ton, 2054 (Bronze Medal), Frank Snowden (W L.), Keighley, York 1995; Frank Snowdon (B L.), Keighley, Yorks), 1967.

Section 2. Heavy Breeds.—E. Watson (W.W.), Colne, Lanc 2117 (College Shield and Gold Medal); Miss M. Fowler (W.W Blackburn, 2220 (Silver Medal); G. B. Metcalfe (W.W.), Lechlad Glos., 2017 (Bronze Medal); W. Lister (L.S.), Northiam, Susse 1932; G. W. Reeves (R.I.R.), Whitchurch, Salop, 2012.

SMALL FLOCK TRIALS.

Best Pen, Silver Cup.—D. W. Gunston, M.P., Reading, 1387.

Section 1. White Leghorns.—F. A. Welch, Cheltenham, 14 (Gold Medal); W. McMahon, Newton Mearns, Renfrewshire, 13 (Silver Medal); The Cotswold P.F., Stroud, Glos., 1370 (Bron Medal); G. Keith Simmons, Honiton, Devon, 1303; Capt. J. Thom son, Shrewsbury, 1351

Section 2. White Wyandottes.—D. W. Gunston, Reading, 13 (Gold Medal). Frank Snowden, Keighley, Yorks, 1273 (Silver Medal W. Measures, Sharnbrook, Beds., 1309 (Bronze Medal); E. H. Sike Ingatestone, Essex, 1253; Mrs. Alec Wilson, Garth, Brecon, 1267.

Section 3. Rhode Island Reds.—F. and A. H. Sanders, Rugb 1337 (Gold Medal); Mrs. Molloy, Antrim, Ireland, 1319 (Silver Meda Dashwood Farms, Ltd., Doddington, Oxon, 1883 (Bronze Medal Mrs. E. Ball, Rugby, 1192; R. Green, Preston, Lancs., 1160.

Section 4. Sussex.—F. Ronald Sanford, Shrewsbury, 1166 (Go Medal); W. Bradbury, Bury, Lancs., 1154 (Silver Medal); Capt. A. Plimpton, Beverley, East Yorks, 1184 Bronze Medal); A. Robi son, Bawtry, Yorks., 1179; Miss Harrison Bell, Welwyn, Herts, 10

Section 5. Black Leghorns.—W. A. Lansley, Whitchurch, Salo 1226 (Gold Medal); C. L. and J. A. Thomson, Holywell, 1272 (Silv Medal); Mrs. M B. Cowley, Abingdon, Berks, 1139 (Bronze Meda J. H Wilkinson, Higher Heysham, Lancs., 1183; N. S. Robinso Spilsby, Lincs., 1210.

Section 6. Any Other Light Breed.—W Hamnett (An.), Bla pool, 1151 (Gold Medal); S. Street-Porter (An.), Ely, Cambs., 1 (Silver Medal); H Lyndon Lomon (La B.), Devizes, Wilts, 1 (Bronze Medal); Dr. R. B. Reed (An.), Colchester, Essex, 11 The C.W.S. (An.), Whalley, Lancs., 1084

Section 7. Any Other Heavy Breed.—Miss P. Mills (Rks Bishop's Castle, Shropshire, 1290 (Gold Medal); O. C. Brown (Rks Scunthorpe, Lincs., 1235 (Silver Medal); F. R. Welch (Rks.), Bew ley, Worcs., 1143 (Bronze Medal); Mrs. J. H. Walker (Barn.), Ne digate, Surrey, 1207; P. E. White (Rks.), Market Drayton, Salo 1201.

SINGLE BIRD TRIALS.

Section 1. White Leghorns.—W. H. Golden, Leire, Rugby, (Bronze Medal); W. Hamnett, Blackpool, 255; S. E. Illingwort Bradford, 255; Miss H. Baylis, Stratford-on-Avon, 256; E. Les Pattison, Longton, Staffs., 223.

Section 2. White Wyandottes.—Mrs. Alec Wilson, Gar Brec., 276 (Bronze Medal), S. and T. Greenall, Grantham, 2 E Watson, Colne, Lancs., 223; A. Hughes, Malpas, Cheshire, 2 Will Barron, Preston, 229.

Section 3. Any Other Light Breed.—S. Street-Porter (B.I Ely, Cambs. 229 (Bronze Medal); Chivers and Sons, Ltd. (B.L.), H ton, Cambs., 241; W. Hamnett (An.), Blackpool, 217; R. A. and M Johnson (Bl. L.), Chalford, Glos., 221; A White (Bl. L.), M pas, Cheshire, 209

Section 4. Any Other Heavy Breed.—R. Groom (R.I.R.), Pr ton, 240 (Bronze Medal); Tom Barron (R.I.R), Preston, Lan 218; A. White (L.S.), Malpas, Cheshire, 205; E. Leslie Pattis (R.I.R.), Longton, Staffs., 188; L. J. Measures (R.I.R.), Keysto Hunts., 189

The "Bazaar" Challenge Cup. For the pen of six birds w the highest record in value of eggs produced.—D. W. Gunst Reading

Poultry Club Bronze Medals. For pens which, having attai a high standard of first-grade eggs in the first eleven months the trials most nearly conform, in the opinion of the Poult Club judge to the standard for their respective breeds.—Wh Leghorns: B. Threlfall, Churchtown, Southport. White Wy dottes. Major Kingscote, Newport Pagnell, Bucks. R.I. Re Dashwood Farms, Ltd., Deddington, Oxon. Light Sussex: Ma H. Whaley, Oakham Any Other Light Breed: W. Hamn Blackpool (An.). Any Other Heavy Breed: Miss P. Mills, Bisho Castle, Shropshire (Rks.).

Answers to Queries.

Continued.

G. M. D. (Loughborough). If you were only using 10 per cent. fish meal in the mash, then it is obvious that the gout, which the post-mortem finding states is the cause of death, could not have been due to excess of animal protein. The probability is that there was a predisposition to gout with this individual bird. Under the circumstances it would be most unwise to make any reduction in the quantity of fish meal you are using; you cannot treat the flock for the individual. (2) As the pullets are survivors from a brood affected with B.W.D. you would be most unwise to breed from hem. I should hardly think it worth your while to ave them blood-tested. (3) No, you cannot detect ex of chicks from Black Leghorn x R. I. Red at atching.

A. R. (Ayrshire). I am afraid space is too limited to llow me to answer all your questions in reference to mall eggs You have the misfortune to possess a lock of Wyandottes which lay eggs so small as to be lmost unsaleable, and what you wish to know is vhether you can improve the size by careful mating vithout decreasing the average yield, which is remarkble. For my own part I would prefer to sell the irds, for to effect any real improvement will be edious work, and need the utmost care in selection. ou must begin by obtaining a male bird from a hen vith a record of not less than 250, paying particular ttention to the winter record, and that of August and eptember. Eggs should not weigh less than 2¼ozs. areful selection of the pullets from this mating will e necessary, the majority of them will inherit the mall eggs of their dams, and probably you will find he most prolific pullets among these. Your selecon will be, of course, with the rest, but some of these ill not be homozygous or "pure" for the large egg, nd may produce daughters which will inherit the mall egg of their grand-dams. These, of course, ou will have to discard, as well as their ams, and mate only those which have prouced all pullets laying large eggs. Even mong these pullets you may find some which ill produce progeny laying small eggs. It is really question of "purifying" your strain of the small egg ctor. You must be most careful in your selection males, and should get the pedigree on both sides r three or four generations. Do not breed from any en which does not lay a two ounce egg after she has een laying three months. (2) This is a good sample fish meal, and excellent value as prices go. The ound oats are not Sussex ground; there is too much sk in them; they are not worth the money.

Puzzled (S. Wales). Do I think you have been had? ell, you have probably paid 5s for hens which you uld have bought in the market for 2s. How could u really believe that you were going to get White ghorn pullets, 1924 hatched, of 258-egg strain, sent all the way from Yorkshire for 5s. each, or 45s. a dozen? What you have got are probably some ancient hens picked up by a higgler on the farms for about a shilling each. If they are not too tough to stew, that is the best use you can make of them. Whatever you do, don't breed from them, for the cockerel of "274 egg strain" is worthless. You will one day understand that the phrase "egg strain" has no meaning

Kumber (E. Lancs). I have examined the sample of mash sent, and the cause of the trouble would appear to be a very inferior brand of meat and bone meal, in which I found a good deal of hair and hide; the other ingredients in the mash were of fair quality I am afraid there is no alternative but to scrap the remainder of the mash It would be very hard work to sieve 3cwt., and pick out the hair and hide, and cooking would not help matters (2) I don't think it was the intention of the mover of the resolution to "force a standard weight on the industry." He believes —and as you ask the question, I agree with him—that an improvement in body size would result in improved health and vigour. Those who do not wish to comply with any standard the committee appointed may fix cannot register their birds. No, you are wrong, the mover does not want to breed giants; we are out for a medium bird; extremes either way must be avoided. (3) No, I don't believe that lack of stamina is necessarily associated with high fecundity. I have already said so, but will write again on the subject some day, if you and your friends think the idea is so prevalent, and that it will do good.

WEST SURREY POULTRY SOCIETY WINTER LAYING TEST, 1925-6.

Held at Chilworth Poultry Farm, under the management of Messrs. Hudson Bros.

REPORT FOR FIRST MONTH.

The general health of the birds since the test started has been excellent, notwithstanding the variable weather conditions, not even a single cold had been detected until the fourth week, when one bird, being found slightly off colour, was isolated.

A number of birds were laying on arrival, and some of these dropped off for a time, but nearly all are starting again now. A lot of pullets are still very immature, and very few pens have all birds in lay. There has not been a single case of broodiness.

The total eggs laid during the period under review was 1,222 (i.e., 9.54 per bird), the highest daily total being 52. and the lowest 39

The test was inspected on October 29th by Major S. H. Eden, Small Livestock Inspector of the Ministry of Agriculture.

A special award has been offered for the individual bird laying the most first-grade eggs each month. This is won for the first period by Capt. Britt's White Wyandotte, No. 78, with a total of 22 first-grade and two second grade eggs. Sir J. Leigh's Light Sussex, No. 64, being second with 19 first and two second grade.

Report for the First Month (Four Weeks)—October 5th to Nov. 1st.

Figures are Eggs and Points respectively.

White Wyandotte.—Capt M. H. G. Britts (b), 55. 51, Burrows Lea P. Farm, 38, 38; Capt. M. H. G. Britts (a), 33, 33; H. Rowntree (a), 32, 30

Rhode Island Red.—W. Ezzard, 50, 47; N. Surrey P. Farm. 37, 37: H. W Homewood, 35. 35; J B. Bantoft, 34, 32.

Light Sussex.—Sir J. Leigh, 66, 60; Burrows Lea P. Farm, 62, 57.

White Leghorn.—W. Ezzard, 67. 67; Sir J. Leigh, 51, 49; Burrows Lea P. Farm, 51 48; N. Surrey P. Farm (b), 44, 40.

Black Leghorn.—H. G. Hood and Sons (a), 38. 37; H. G. Hood and Sons (b). 32. 30; H. Rowntree, 28. 25.

Correspondence—Continued

THE ECONOMICAL, EFFECTIVE, AND PERFECT(?) POULTRY HOUSE.

To the Editor of "Eggs."

Dear Sir,—I was once asked by a novice what was the best and most up-to-date book he could get on poultry-keeping? My reply was, "Get the bound volumes of 'Eggs' for the past two years, read them carefully from the beginning and make notes on the front page of each issue of anything that strikes you, and you will have at your disposal all the most recent information on the subject that matters." And who reading your "Dairy Show" issue will question that my advice was sound? The two articles "Economical and Effective Housing" and "What is Ventilation?" are examples in one issue of the kind of helpful matter that readers of "Eggs" look for and find there, and I am sure that your readers will be most grateful to the authors of these articles, which are each in their different way of so much interest.

Taking the former article first, it is evident that the cost of erection of such a house as he describes to the general farmer would practically amount only to netting, nails and wire since they have the timber, straw, and, at this time of the year, spare labour; whilst to those who have none of these it is even then economical, and for this alone Mr. Price is entitled to our gratitude.

But what would Mr. Somerville have to say regarding the ventilation? "Ventilation begins at the bottom and ends at the top." "With any type of house in which the air ports are above the birds' heads and fresh air is forced in, you will get CIRCULATION in the form of swirling eddies creating strata of mixed, foul and fresh air at varying levels, till eventually diffusion—wholly or partial—occurs." It is unnecessary to quote any further from Mr. Somerville's article to show that excellent as Mr. Price's house is from an economic point of view, from a ventilation point of view it perpetuates existing faults which, according to Mr. Brain, are the cause of all diseases of the respiratory system.

Now if we turn to Mr. Somerville's article, it would appear that the house he has in mind, whether of the "apex" or "span-roof" type, are to be **closed** houses save for the purpose of entrance or exit of attendants, since any other would be incompatible with "ventilation by induction."

Presumably this closed house would have ordinary windows for purposes of **light,** not air. If I am right in this presumption then the ultra-violet rays which are becoming recognised more and more as essential to growth, development, and general well being of animals, do not penetrate into his house, being effectually filtered out by the glass of the closed windows. In this respect M Price's house has the advantage.

Some time ago we read something (in "Eggs of course) about a kind of flexible glass which ha the desirable property of **not** filtering out the rays. It was to be put on the market very shortl Is it going to materialise?

It seems to me that we are getting very clo upon the heels of that desirable residence, t perfect poultry house, which should be:—

(1) Economical in construction.
(2) Free from draughts.
(3) Perfectly ventilated by induction.
(4) **Flooded** with light through windo which do **not** filter out the ultra-violet rays.

Turning once more to Mr. Price's straw hous it occurs to me that it is not everyone who wou like to construct one of these, who can comma the services of a thatcher, when and where th want him. It also occurs to me that I have se somewhere a machine into which straw is fed one end and is pressed tightly together and se with binder twine or other material, and passes c at the further end in the form of ready-ma thatch. Perhaps some of your readers may kn of such a machine. It would be of great assi ance to many who contemplate building a str house if they could order so many hundred f of a certain width of straw thaching with th wire netting.

Perhaps this will develop into an industry, sir wood is so expensive. Must bring the matter the attention of the "Rural Industries, Ltd."

"LIGHT SUSSEX."

STRAW POULTRY HOUSE

To the Editor of "Eggs."

Dear Sir.—I am extremely sorry to have missed Price at the Dairy Show, when he might have m one or two points clear to me regarding its c struction.

The exclusion of rats seems to me one of the m important items, and I should very much like to k whether the netting he advises stretched over frame and under the straw will keep them out.

I ask the question because last July I described Apex House I have built here, and stated that I sunk 1in. wire netting two feet down all round house.

I am now busy removing this and replacing ½in netting, as the larger mesh does not keep th out.

The rats, of course leave the felt covering seve alone, so that I hope the change I have made wil effective.

With regard to the ventilation I take it that suffic air will pierce the thatching to give the neces ventilation.

Excluding labour. Mr. Price's house works out at
. 2d. per bird (at 4ft. per bird), whereas my Apex
ouse worked out at 2s. 6d. per bird, so his costing is
ghtly lower than mine. I should think in a windy
ot like Partridge Green, the Apex house would prove
ore suitable, but in sheltered places the Straw House
uld certainly be more pleasing to look upon

In spite of Mr. Somerville's repeated assertions that
Apex House should be built at an angle of 60
grees in order to get the proper ventilation, I must
ost respectfully beg to differ from him as far as my
use is concerned, and I really do not see the neces-
y, if the house is big enough, to sacrifice so much
or space as his method of construction would
volve.

During the recent very high winds which went up
65 miles per hour in these parts, I tested the house
ost carefully for draughts all round above and below
e perches, but was unable to discover any. The air
always clear and fresh even on the muggiest days.

Your obedient servant,

FRANCIS J. HEMELRYK.

STRAW HOUSES.

To the Editor of "Eggs."

Dear Sir,—I read with interest the article and plans
the Straw House. It is a type of house which we
ice used when in Kent, but owing to the very low
ices which that type of house fetches in a sale, it
rdly pays to build them unless one is very settled.

These houses are much better if they are built in
ctions, to bolt together, as they at once become
ovable. If the frame work is made of 2in. or 3in. by
n. battens, it can be covered with 3in. mesh netting
th sides, and the 2in. space between the netting can
stuffed with straight lengths of straw.

If the house is made in this way the old straw can
replaced with fresh straw whenever necessary.
ius, at a very little extra expense, making the life
the house as long as the life of the battens, which
a good number of years.

I remain, yours faithfully,

BERNARD REDDAWAY.

STRAW HOUSES.

To the Editor of "Eggs."

Dear Sir,—As I am keenly interested in the economic
uiding of poultry houses, perhaps the following com-
ents on the Straw House, described in your Dairy
iow number, may be of interest to readers contem-
ating building a house of this description. To be
onomic, three points have to be considered, viz.:—
) Cost. (2) Situation. (3) Durability.

Taking them in order. The cost of the house illustrated has been under estimated as regards straw and wire netting. Of the former about two ton would be required to enable sufficient "drawn" straw to be used for thatching, cost £3 to £3 10s. per ton

Three inch mesh wire netting would be of no use to keep out rats or rabbits. These would play havoc with the bottom thatch, causing endless draughts. One inch mesh would have to be used on ends and sides to be effective, thereby nearly doubling the cost of that portion.

As fowls are naturally addicted to "pecking and scratching," anything like an ear of corn attracts their attention with disastrous results to the thatch unless this is covered with netting—a further expense.

(2) Situation: If placed in an orchard or near trees, autumn leaves would settle and soon decay the top thatch, and the houses would be far too dark. In my opinion the lighting space is far too small to admit of sufficient sunlight for most of the year.

(3) Durability: As these houses have not been in existence for any length of time, perhaps (to quote your own words) it would be better to "bide a wee" before condemning them on this score before another winter has passed.

May I add that through the kindness of a lady poultry farmer I was permitted to inspect one of these houses (42ft. x 15ft.), built about three months (two tons of straw being used), and the pullets have already played havoc with the roof (about 3in. in thickness) and the sides, and at least one more ton of straw will have to be used to make it weatherproof for this winter. I am very doubtful if the smaller poultry keeper would find this house economical with its yearly upkeep, and having to buy all materials. I am convinced that the initial cost of a sound wooden house would not be so expensive in the long run as that of a straw one.

I am, Sir, yours faithfully,

F. E. RICHINGS.

AN APOLOGY.

To the Editor of "Eggs."

Dear Sir,—I have to-day had my attention called to an advertisement of mine which appeared in "Eggs" lately, and which stated that the Black Bresse offered was bred from pen headed by Winner of First and Special at Olympia, whereas I should have added "In Novice Class." I know little of showing and its technicalities, and I generally cut advertisements short, leaving full detail for actual correspondence with a prospective purchaser, but, though quite innocent of any intention of deceiving a buyer on the question, I realise that I have been guilty of a breach of etiquette, and should be greatly obliged if you could see your way to publish this statement with my apology to the poultry world at large, and in particular to the Bresse Club and the exhibitor of the Winner of the First in the **Open** at Olympia last year.

Yours truly,

F. W. MORETON.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING, FRIDAY, 6th NOVEMBER, 1925.

GRAIN AND FEEDING STUFFS.—Moderate supplies of English wheat are in fairly good demand and prices have again advanced, the average quotation being 11s. 1d. per cwt., an increase of 2d. per cwt. on the week. Spot supplies of imported wheat are on the short side and values are higher at most markets, No. 1 Manitoba averaging 12s. 9d. per cwt. Trade for home-grown malting barley is similar to last week and average quotations are unchanged, prices at London ranging from 10s. to 18s. 9d. per cwt. British feeding barley also sells at recent rates, except at London where prices have advanced from 8s. 9d. to 9s. per cwt. on the week, while imported is in little request and has an easier tendency. Fair offerings of English oats meet a moderate demand at late rates, white varieties averaging 9s. 4d. and black 8s. 9d. per cwt. Foreign oats are scarce, none being on offer at Hull, but prices generally record little alteration. Maize is slightly cheaper at Hull and London.

Bran generally makes late rates, but at Hull, where supplies are short, prices have advanced 5s. per ton, while coarse middlings meet a slow trade, and are cheaper at Liverpool and London. Meals generally are in little request, and maize meal is cheaper at several markets. Oil cakes mostly sell at late rates, any price changes being in favour of buyers.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull, £7 7s; Liverpool, £7 5s; London, £6 17s. Broad Bran: Bristol, £8 17s; Hull, £8 17s; London, £8 5s. Middlings—Fine (Imported): London, £9 5s; Coarse (British): Bristol, £9; Hull, £9; Liverpool, £8 10s; London, £7 17s. Pollards (Imported): Bristol, £7 5s; Hull, £6 15s; London, £7 2s. Rice Bran: Bristol, £7 10s; Liverpool, £7. MEAL.—Barley Meal: Bristol, £9 15s; Hull, £9 10s; London, £10 2s. Maize Meal: Bristol, £10 15s; Hull, £9 8s; Liverpool, £9 7s; London, £10. Maize Meal (S. African): Bristol, £9 7s; Hull, £8 10s; Liverpool, £8 7s; London, £8 12s. Maize Germ Meal: Hull, £9 15s; London, £9 10s. Maize Gluten Feed: Bristol, £11 7s; London, £9 15s. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 5s; London, £9 12s. Bean Meal: Bristol, £13 15s; Hull, £11 3s; London, £12 5s. Fish Meal: Bristol, £21; Hull, £20 10s; Liverpool, £20 10s; London, £20 10s.

EGGS AND DEAD POULTRY.

English eggs and best imported selections are in light supply, and these have again advanced in price, but secondary grades are in only moderate request. There is a fair inquiry for dead poultry and recent quotations generally govern the trade.

Week-end Prices—Eggs (per 120): British, 29s 9d, 24s 0d; Irish, 28s 6d, 27s 6d; Danish, 28s 6d, 27s 6d; Dutch, 29s 3d, 27s 3d; Canadian, 21s 0d, 20s 0d; Belgian, 26s 0d, 24s 9d; Italian, 23s 0d, 22s 0d; French, 24s 0d, 23s 0d; Lithuanian, 17s 6d, 16s 6d; Polish, 14s 6d, 14s 0d; Chinese, 15s 0d, 13s 6d; Russian, 16s 6d, 12s 6d; Australian, 23s 0d, 22s 0d; Esthonian, 17s 0d, 14s 0d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 6d, 1s 2d; Irish, 1s 0d, 11d; Others, 1s 3d, 1s 0d. Ducks, 1s 2d, 1s 0d. Geese, 1s 1d, 10d. Turkeys, 1s 5d, 1s 2d.

EGGS.

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DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford:

(Continued at Foot of Next Column).

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, November 11th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

PROOFS.—We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 5d; Second, 1s 3d. Welshpool, First, 1s. 2d; Second, 1s 0d. *Derby: First, †4s 6d; Second, †3s 6d. *Ipswich: First, 1s 4d. *Shrewsbury: First, 1s 5d; Second, 1s 3d. *York: First, †6s 0d; Second, †5s 6d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

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EGGS

THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN

(Founded in 1912 by RANDOLPH MEECH).

egistered at the G.P.O. as a Newspaper.
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Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months ,, ,, 6/4
Three Months ,, ,, 3/3

SPECIAL PEN—WHITE LEGHORNS (1925).

Headed by Jan.-hatched cockerel, son of hen No. 10, record 274 in pullet year, weight at end of pullet year 4 lbs., from sire with dam's record of 291.

Hen		Eggs.	Weight at end of production.	Hatchability p.cent.
No. 88	record	260 in 12 months	4lb. 0oz.	
,, 209	,,	241 (incomplete)	4lb. 4oz.	91
,, 216	,,	447 2 years	5lb. 0oz.	91
,, 261	,,	258 12 months	4lb. 8oz.	89
,, 309	,,	491 2 years	4lb. 0oz.	89

Hen		Eggs.	Weight at end of production.	Hatchability p.cent.
No. 330	record	252 in 13 months	4lb. 4oz.	80
,, 404	,,	285 12 months	4lb. 2oz.	95
,, 524	,,	266 13 months	4lb. 2oz.	89
,, 555	,,	284 12 months	4lb. 0oz.	88
,, 454	,,	260 (incomplete)	4lb. 2oz.	80

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Record 285 in 12 months. Weight 4 lb. 2 oz. Egg 2¼ oz. Hatchability 95 per cent

Pedigree and Price List on application, also of Rhode Island Reds (S.c.) and L. Sussex Cockerels.

Bred and owned by Miss MALCOLM and Mrs. PEMBER,
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Kibbled Maize—no better obtainable (screened)	11	3	11	6	11	9
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No. 2 Canada Western Oats ...	11	6	11	9	12	0
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Yellow Maize Meal or White	10	9	11	0	11	3
Maize Gluten Meal	9	9	10	3	10	9
Alfalfa Meal—very best quality	13	3	13	9	14	3
Soya Bean Meal (Extracted) ...	12	9	13	0	13	3
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Cockle Shell or best Flint Grit	3	6	4	0	4	6

Per cwt. free on rails at Horley Stn. Delivered within 15 miles at small advance. For smaller quantities add 3d. per cwt. to 5 cwt. prices. Carriage paid prices quoted, also any other article and samples supplied. Granaries always open—you can watch mixing and examine ingredients.

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The "Heydown" Pre-eminent Strains

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THIS WEEK'S TESTIMONIAL.

THE "HEYDOWN" STRAIN IN THE ORKNEY ISLES.

"The 30 White Wyandotte hens, recently supplied Kirkwall, are a very special lot, and ever since their arrival have *daily exceeded 50 per cent. eggs* laid, and are still keeping up their reputation."

(Good going this for October production).

W.L., W.W., B.L., L.S., R.I.R.

Send a postcard at once for our illustrated catalogue.

JOHN H. DOWDEN & SON,

"Heydown," Heathfield, Sussex.

The 'Eclipse' Poultry Houses

Manufactured by a PRACTICAL POULTRY FARMER.

A No. 8 (Three-Section) supplied i and used intensivel by Mr G. Calthro Junr., Normane, Wells, Norfolk.

SATISFACTORY VENTILATION IS PROVED BY RESULTS, NOT BY THEORY ONLY.

Our own experience over a period of nearly 10 years with "Eclipse" Houses has been absolute immunity from colds, roup, or kindred ailments amongst the stock so housed.

This we believe would also be the testimony of all our customers. With these houses FLOOR VENTILATION is not necessary, but is provided for and obtained when desired by the simple adjustment of window buttons.

Fullest enquiries and inspection invited.

A specimen No. 2 House will be on view at our STAND, No. 36, CRYSTAL PALACE, November 17th-19th.

HERBERT W. MARTIN, PERIVALE POULTRY FARM & APPLIANCE WORK
EAST HARLING, ATTLEBOROUGH, NORFOL

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, NOVEMBER 18th, 1925.

Editorial.

PORRIDGE.

Vhile on holiday in Scotland in the summer it
s our misfortune to incur the displeasure of a
y, because we did not eat porridge for break-
t. "You do not eat porridge; is it because
ı do not like it, or is it possible that you do not
ieve in its virtues?" was the demand made
a severe tone of voice. Hesitatingly, we replied
t we did not like it, and had no particular
son to believe that it possessed any greater
ue than the more palatable bacon and egg.
lady gasped, and in still more severe tones
ed us to explain why the Highlanders were the
st intelligent, and physically the finest race in
world—if it was not due to the porridge?
ore venturing on an explanation, we mumbled
enquiry as to whether she had Highland blood
er veins. On being assured that was the case,
deemed it advisable to postpone our explana-
until a more suitable opportunity. It is not
posed to make that opportunity here. The
dent is only mentioned as a queer illustration
what we may bring ourselves to believe if we
told a thing often enough, and how we may
w ourselves to be hampered by such fallacious
s if we do not examine them, but simply
ept them as the wisdom of the ages.

ome years ago there was an idea that all
n workers should eat a great deal of fish. We
e told that the longevity of the Irish peasant
due to his consumption of potatoes, and that
he Bulgarians to sour milk. Now one must
ise how nonsensical all this is, and how such
s may hamper us in our own industry if we
w them to do so. Undoubtedly there are
y which are doing so at the present time,
ough a great many of them have been exposed
hese columns from time to time.

give some examples :—

e mating of a second-season male with
ts is always recommended. WHY?

hy do we recommend that eggs which have
elled by rail should be rested twenty-four hours
re being incubated?

Why should we be advised to air eggs which are stored for incubation?

What was the origin of the idea that barley and maize cause liver disease?

Why (egg production being the objective) were we first advised to cross breeds, then advised not to do so, now again advised to cross breeds?

Why do we believe a crossbred NECESSARILY possesses greater stamina than a pure-bred?

Why was the crossing of strains advised, then the contrary advice given, and why are we now advised to cross strains?

Why was line-breeding believed to be necessary to successful breeding for egg production?

Why do we believe that Millet, Canary Seed, Hemp, and Dari are necessary ingredients in a dry chick feed?

What was the idea of giving a weekly dose of Epsom Salts?

How did the idea arise that dried insects have any special virtue?

Why do all commercial egg farmers run the White Leghorn?

Why do we believe that high fecundity is incompatible with constitutional vigour, good hatchability and good rearability?

Why do we say that eggs intended for incubation should not be kept for more than ten days?

Why are we advised to remove males directly the breeding season is over, and keep them from the hens?

Why are we so often advised to feed broody hens on maize only?

Why are hard-boiled eggs, or egg custard, so often recommended for young chicks?

These are only a few questions one might ask, they are ideas which are held by many poultry-keepers at the present day, and they are very costly in many ways. It is not our intention to merely print them here and not attempt to answer them, but for the present we are content to leave them for readers' consideration and deal with them later. Anyone who has been acquainted with the poultry industry for a number of years must recognise that many of them are of ancient origin, and in the light of later knowledge will not bear examination. Most of them are still held by a very great number of poultry-keepers, as we learn every day, and they do hamper progress. We may be told that they are the result of long experience, but many of those who claim long

(Continued at Foot of Column Next Page).

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answer all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

S. C. (Kilrea) wants to know how to use potatoes in the mash. The best way would be to use two parts bran, 4 middlings, 2 potatoes, one fish meal or meat and bone meal. If meat and bone meal is used, my correspondent must make certain that there is not an excessive amount of bone in it. On the whole, I should prefer to use fish meal with potatoes, unless I used a pure meat meal. It would be quite unnecessary to use maize meal with potatoes, nor would Sussex ground oats have much value in such a formula. Care should be taken that the sample of thirds or middlings is a good one.

M. F. (Clandeboy) has a flock of pullets, April hatched—some White Leghorns and some cross-breds. In order to have them laying as soon as possible they have been fed morning and evening on a mash consisting of: One part ground oats, 2 pollards, 1 bran, 1 "Fedoe," and 1 part maize meal. Of this they had as much as they could eat, and were in good condition, on free range, with plenty of grass fields, straw sheds, etc., to scratch in. One day one of the pullets went lame, and this was killed. Immediately there was another in the same way, and soon five birds were affected with paralysis, some of them could neither stand nor walk. They were put into a dry house and Epsom salts were given to the whole flock, and the feeding changed to grain alone. No more
birds have been taken ill, although none of the
are walking as they should. Of the birds isolat
about fortnight ago, four are almost better a
the fifth has to be held up to feed, but has
appetite and looks like recovering. "M. F." ca
to the conclusion that the feeding must be wron
I wish "M F." had sent me samples of the foo
My impression, however, is that these were so
very prolific pullets which had been fed on t
stimulating a ration, and were suffering fr
layers' cramp. The change of diet put them rig
If "M. F." tries the following mash in place
the one which he is using, I do not think a
further trouble will arise: One part bran,
pollards, half Sussex ground oats, half maize m
and half meat meal. As grain, it would be wi
to give good plump white oats and wheat at t
present stage and a change to maize later
It is quite unnecessary to kill these birds. T
best plan is to isolate them at once, stop ma
feeding. A little boiled rice is the best thing, a
a little grain. Give a mild dose of Epsom sal
and keep them quiet in a hamper on soft h
The feeding, I think, has been too stimulati
As a rule, "M. F." will find the birds suffer
from layers' cramp look unusually bright in
eye and comb, but simply cannot walk, and
appetite is generally fairly good.

"A Beginner" (Emsworth) is thinking of go
in for poultry more extensively. His object is
pullets, and he asks me to state the size of hou
A good size for about 100 pullets would be 25
x 12 ft. White Leghorns, Black Leghorns,
Rocks or R.I. Reds would be his best breed
egg production, but, as he has White Wyando
and White Leghorns, he could continue with th
being careful in his selection. I would not ad
him to buy a second-hand incubator. It wo
be better to get a new one, and if he joins
S.P.B.A. he could get one at a special disco
As for foster-mothers, it depends on the
which he has. It is not necessary for these
be in a house.

A. D. (No Address) sends me a sample of m
which is stated to be guaranteed to be made
to my formula. I wish readers would underst
that I cannot be responsible for anyone
chooses to make up a mash and call it to
formula. "A. D.'s" birds have gone off lay
and they do not eat the mash nearly so wel
when he mixed it himself, following the inst

EDITORIAL.—Continued.

experience have been lacking in observation,
have not always made correct deductions
what they have observed. That will probabl
said of all of us in the days to come, but a
good may be done if we enquire into them no

ons in "Eggs." It is not a good sample of ash, and when members cannot buy through the P.P.A., in most cases, unless they are buying om a reputable firm, it would be advisable for em to get the ingredients separately and mix e mashes themselves.

"Novice" (Burbage) sends me the following ash, which she says has proved beneficial while r birds are laying, but they do not benefit ring the moulting period while the production eggs is not so plentiful. The formula is :— 6 lbs sharps, 56 maize meal, 112 bran, 56 Sussex ound oats, 28 alfalfa meal, and 56 fish meal. is is a very good formula and, providing the e ingredients are correct, it should give good sults; but I would rather see the combination bran and alfalfa meal reduced to half the quany. Naturally, during the moulting period, the oduction of eggs is not so plentiful. Alfalfa eal in the mash is unnecessary, as "Novice's" rds have an ample supply of green food. The xture is 15s. per cwt, but as I have not seen any the ingredients I cannot express an opinion as whether it is worth this money. At any rate s. cwt. is quite a sufficient price to pay. In ply to her question as to whether I can make y suggestion of lessening the cost, I think, as laying mash, it might be made as follows :— ith a plentiful supply of green food the alfalfa eal is wholly unnecessary. Reduce the bran to lbs., increase the maize meal to 84 lbs., and e Sussex ground oats might be reduced to lbs., and in place of fish meal my corresndent might get a good sample of meat and ne meal, which would be cheaper.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression at they must necessarily be scientists, pedigree eeders, or farmers on a large scale to render emselves eligible for membership of the S.P.B.A. is idea is quite incorrect. The S.P.B.A. is out assist all grades of poultry-keepers, from the oprietor of the 10,000-hen farm to the intensivist th his dozen or so birds; all are entitled to equal nefits. The Five Shilling subscription brings th it many advantages, namely : Free Advice by st, a Copy of the Annual Register, the Benefits the Discount System, and many other vantages too numerous to mention here. You ould write for full particulars to the Secretary, OM NEWMAN, The Beeches, Rudgwick, rsham, Sussex. The financial year began on t September.

Selecting the Breeders.

Broadcasted by H. R. HUNTER,

From Bournemouth, 29th October, 1925.

I have been asked to speak to-night on the subject, "Selecting Birds for Poultry Breeding Pens." To those of my audience who are not interested in poultry my advice is to switch off their receivers at once, but those of you who *are* interested in those aggravating things called hens will agree with me that the selection of the right birds to breed from is one of the most important factors in poultry-keeping.

In treating this subject I am dealing with it strictly from the utility or egg production point of view, and not from an exhibition standpoint. First of all I will take the case of the poultry farmer who trap-nests, and later with one who does not. On the selection of suitable birds to breed from depends not only your *next* year's egg yield, but possibly several years after. If you breed from poor layers, their offsprings will most certainly be poor layers also, and *you* will keep the birds instead of them keeping you.

In the first place I advocate breeding from hens which are in their second year or third or fourth year, if they are good birds, but I do not like breeding from pullets. On my own farm we trap-nest every year about 800 pullets. Each one of these birds has a numbered ring, and every egg laid is booked down to each individual layer every day, so that we know exactly how many eggs each bird has laid during its first 12 months. I recommend the latter part of July or the commencement of August as the best time to select your breeders for the following season. Any bird about which you are doubtful then can be left in until you make your final selection in October. By that time if you trap-nest you have their twelve month's record, and can decide accordingly. In selecting my own breeders I watch four points:— First, STAMINA; second, HOW MANY EGGS A BIRD HAS LAID; third, SIZE OF EGG; fourth, TYPE. Taking these points in order, as regard the first, STAMINA. The bird must be perfectly healthy. If she is at all delicate discard her at once, as she is not likely to produce strong progeny, and I can scarcely imagine a more depressing job than trying to rear weakly chicks. The busy, bright-eyed hen, full of vigour and "vim" is the one you want.

Secondly: HOW MANY EGGS THE BIRD HAS LAID. As a general rule I should not breed from a bird that has laid less than 180 eggs in her first year, unless she has had some special characteristic which I wanted to perpetuate. This is why I do not like breeding from pullets. At the time you want to hatch their eggs they have only been laying a few months, and however well they start they may be early quitters, and end the year with poor records.

Thirdly: SIZE OF EGG. It is not a bit of good breeding from birds which do not lay a two-ounce egg.

I know what a temptation it is to breed from a bird with a high record, but which only lays a 1¾oz. egg. If you *fall* to this temptation you will very soon find the average size of eggs of your birds has deteriorated, and consequently you will have to accept second-grade prices for your eggs. To place on record the size of egg a bird lays: On my farm we weigh every egg in January and February of their pullet year. If they do not habitually lay two ounce eggs by that time, then they are not eligible for the breeding pen the following season. We hear so much about the 280 or the 300 egg strain. Strain is just the right word—not only on the hen, but on our credulity! I don't suppose there are half-a-dozen birds in the kingdom that laid 300 eggs in their first year, and those few that can show such a high record in all probability lay an egg which is not a full two ounces. If you will take my advice, when buying eggs or birds, to put fresh blood into your stock, seek out the careful and methodical breeders who keep accurate records and pedigrees, and you will probably get what you pay for. A County Poultry Instructor is always ready to put you in touch with a good breeder

Fourthly: TYPE. Do not breed from a bird that is very large or very small for the particular breed you keep. You do not want them to look as if they are walking on stilts, or as if they are a cross between your birds and bantams. I am a great believer in texture. The plumage should be soft and silky, and pleasing to touch. Aim at keeping your birds true to type of whatever breed you keep.

Let me now have a few words with the poultry-keeper who does not trap-nest.

In selecting your birds for the breeding pen you have two points to guide you—observation and handling. Let us take observation. You should go through your birds in July or early August. If you leave it until later many of the birds will be moulting, and it is a very difficult matter to judge much about a bird in moult. In July if you are going through your birds, and find one in full moult and her pelvic bones close together, it is a sign that she has finished laying for the season and she jolly well ought not to have. She ought to appear on either your own or somebody else's table within the next week; or if you find a bird at that time whose plumage is perfect, her tail feathers not worn at all, and her legs and beak have still that beautiful colouring, then it is a sign that she has not worried the nest box very much. She also should journey in a Westerly direction; or the bird with a large coarse head, sunken eye, and its face covered in feathers, as a rule that is no good.

Now let us handle a bird. If when you pick her up she squarks and kicks, and makes a frightful song about it, it is a sign that she is easily upset, and, therefore, probably a spasmodic layer. I like those placid and contented ones, who carry on a gentle, purring conversation with you as you handle them. Feel the abdomen. This should be beautifully soft and silky to the touch. If it is hard and the two pelvic bones are covered in fat, the bird is putting your food into fat and not into eggs. Turn it out. The space between the end of the breast-bone and the two pelvic bo should be about the width of four fingers, the pel bones being fairly fine and pliable. Look at the he See that the eye is bright and prominent—not slee I don't like the wrinkled frowning face, which lo old before it is young. She should have a good br back and good depth from the back to the underne of breast-bone. Handling a bird is a good rough gu in a general way to judge of its laying capacity, it lets you down badly sometimes, as I occasiona find myself when comparing birds with their trap-n records. As an instance of this, last year I sent young pullet to the Crystal Palace Show. I thoug she was a beauty. She handled perfectly. The ju evidently thought so too, because she was award first prize, and that at one of our largest shows. saw the judge afterwards, and looking at the bird gether we nearly wept over her great beauty. N I nearly weep over her record. Instead of lay about 240-250 eggs, as we both expected, she has exactly 100 to date, and has now decided that needs a rest after this great effort, presumably recover her beauty and form. I have an idea she adorn my dinner table very shortly. I merely ment this case to show that handling and observation are from infallible, but they are the only guides you ha if you don't trap-nest. One other point I may m tion. In going through my birds with their recor if a cockerel has been running with the birds, I variably find that any birds with bald heads among my best layers, showing that the cockerel paid great attention to them.

We have considered *only* the females for breedi so far, and now I want to say a few words about male, the head of the breeding pen. He is a v important fellow, and should look his part. It is s by people who ought to know, that the progeny ta the characteristics of the sire up to 80 per cent. Th is a difficult statement to prove, but, at any rate, all recognise that the sire has a tremendous influe on the type of chicks reared. It will, therefore, seen how necessary it is to select a cockerel from really first-class hen. If you don't trap-nest a pedigree breed yourself, then I most strongly adv going to a reliable pedigree breeder to obtain the b bird he can supply you with. When you think of number of eggs a cockerel has an influence over dur the course of a breeding season, a few guineas is w and wisely spent to get one that will increase fecundity of your flock. Select a fellow who looks if he is walking on the tips of his toes all the ti Good broad chest, head well up, and altogether gi one the impression that he has plenty of vigour a "vim." Then if his pedigree is a good one, he sho be what you require.

In conclusion, I hope you will all have a very s cessful hatching and rearing season. It is difficult go into matters very fully in a short chat of t description, but if at any time I can advise memb of my audience who are in doubt, I shall be only pleased to do so if they will apply to me person at the South Winchester Poultry Farm, Twyford, n Winchester.

Utility Duck Club Notes.

By **HUGH B. CARRINGTON.**

Though a great many members came to visit the lub Stand at the Dairy Show, those who did not ay like to hear something about the results during ose four strenuous days.

There was really only one thing sincerely to regret. his was the exceedingly consistent bad weather, hich, while it certainly made stand attendants thankl they were under cover, with equal certainty must ave prevented a good many people from attending e show. However, on the whole, it was a busier me than the previous year. One of the most inresting points revealed was the exceedingly wide stribution of those interested in ducks. We had llers from every part of the country, Yorkshire and e neighbouring counties being particularly strongly presented, from Ireland, Wales, Scotland, the olonies, and from abroad.

It was a special pleasure, among the 40 or more ho joined the club, to enrol one who wished to start uck-keeping in Tasmania, our first member from at part of the world.

Another interesting point is that there are evidently owing up around the country many farms where 0 or 600 ducks are being kept on commercial lines. ere I would like to say that I wish some of these dies and gentlemen were not quite so inartilate; their experiences, if only they could be induced put them on paper, would be invaluable. Can it be at they have no time to write? Very likely—but en none of us ever do have time to do so, and yet e manage it occasionally! If this is not the reason, n it be that they are shy and think they are better ith the quill when it is still *in situ* than when conrted into the pen? If this is the case I only hope ey will put aside this unwarranted modesty, and nd their written contributions for publication. The ditor of the Year Book is an exceedingly mild person, o will be terrified to reject any M.S.S. submitted. please give him a trial, and send along letters ely to be of interest to fellow duck-keepers, no atter if they raise controversial points; in fact, all e better, because it may be possible to publish letters m opposite points of view.

A feature which was even more prominent than last ar was the number of retailers who called at the and. One and all they were unanimous in saying at the high-grade, clean duck egg was what they nted; that they would like to be sure of regular d reliable supplies of such eggs, and that, if they uld get them, they could sell without difficulty, d pay a better price than for irregular supplies, ill arketed.

It is clear that sooner or later the U.D.C. will be le to do a big work organising and placing the procer and retailer in close touch with one another. e first essential is to get every duck-keeper possible o the ranks of the U.D.C. so that the number of ll-marketed eggs may be increased; the number of ty, undesirable eggs reduced.

Hackneyed though the phrase is, I cannot help repeating that "strength lies in unity." The single individual is powerless to help others, or often even to help himself. The group of individuals bound together by mutual interest can do much, and the greater the group the greater its power.

It is not that I want merely to extract the precious 5s. from the pockets of people who feel that it is difficult to spare them, but that I am supremely confident that if only there are enough 5s. and enough energy displayed, it will be possible to organise an industry which to the individual and to the nation will be of real and lasting value. The reproaches of bad organisation in the farming community and low production of eggs, in comparison to the nation's needs have too much truth in them to be pleasant. There is every reason why a young, vigorous and growing industry like the Duck Industry should pull its weight in making these reproaches less true.

As an association of Duck-Keepers we are endeavouring to do three principal things—to get more people to keep ducks, and, therefore, produce more food; to help those whom we so induce to keep their birds at a profit; to show them how to market their produce so that it may be a credit to British methods.

The quill is beginning to get the better of me here, and has strayed wildly from the Dairy Show into the realms of U.D.C. policy; and thence would, were it allowed to wander unchecked, plunge headlong into a diatribe on our system of marketing in the Poultry Industry, the selfishness of the individual, the pressing need for co-operation, and heaven knows how many other allied subjects.

To revert for a moment to the Dairy Show. Arrangements had been made for double the number of duck eggs to be sold on the stand. They were there, but quickly passed into other hands. One always hoped into the hands of someone who needed converting to liking these delicacies. Evidently another year it will be essential to have some 300 dozen available for sale. There is no doubt they would be disposed of very speedily; yet some people say there is no demand for duck eggs!!

Another exhibit which attracted much attention was the apples. Facetious ones asked which breed laid them, others seemed to think that we were a kind of provision store, and could probably produce a banana or a fly paper from some secret recess under the counter, and that we showed a great lack of business acumen by displaying a couple of skeletons, a lot of duck eggs, a few apples and chrysanthemums, and nothing else save a quantity of stupid literature, the only value of which appeared to be that if some could be sneaked without being paid for, it would make a nice addition to the already large collection of pamphlets which had been stored away in one of the excellent paper bags our neighbours, the Black Lake Poultry Farm, were thoughtfully supplying to the populace.

The keen duck men, and would-be keen ones, were much interested to learn of the value of ducks in fruit orchards, and of what could be grown with the help of the manure produced by them. Incidentally one mem-

(Continued at Foot of Column Next Page).

Modern Poultry Feeding.

By TOM NEWMAN.

The following is an extract of a letter from Mr. Wynn Williams :—

"With reference to the White Wyandotte chickens I reared a year last spring, when I commenced using your dry mash system of feeding as detailed in the Year Book, you may be interested to know that results have been very satisfactory. I kept 25 pullets, and these completed their first year of laying the middle of September last, when they had averaged 226 eggs per bird. Most of them are still laying and have now topped 6,000 eggs since they commenced. My only criticism of the dry mash system is that it brings them on to lay rather too early perhaps, though not before they are fully developed, I must admit. You will note that my first lot this year (hatched February 14th) were all laying by August 10th, five of them were laying before the end of July—this is rather early, isn't it? Most of them, I regret to say, are having a partial moult. I keep nothing but W. Wyandottes, and using your system it seems to me that it is not advisable to hatch out before the middle of March if one wishes to avoid the risk of moulting."

I want more particularly to draw attention to Mr. Williams' remarks re feeding and this early maturity or precocity, because such remarks are not infrequent, and they are applied as often to cooked mashes as to dry. It is an entirely mistaken idea. This early maturity or precocity is an inherited factor, the food, unless it be of a very stimulating nature, hardly affects matters. Just as we cannot feed for size—that is, no manner of feeding will allow the bird to develop beyond the size it has inherited—so you cannot hasten egg production, before the date which the bird's inheritance permits it to lay. At least you cannot do so without using excessive quantities of animal protein, or spices, or other stimulating and injurious condiments. But under such treatment a good layer would almost certainly go to pieces in the course of two or three weeks. It would cause serious ovarian trouble, ruptured oviduct, or prolapsus. Now Mr. Williams' Wyandottes were laying at five months old, that is not uncommon with a very prolific strain. The date of hatching was more likely to produce birds which would lay at that age than would have been the case had they been hatched a month later. He should not hatch later because the birds are fed on my system, but BECAUSE he has a prolific and early-maturing strain, and prolificacy and early maturity are correlated. It is a matter of breeding—not feeding. Of course you may retard the date of laying by indifferent feeding, you do not hasten it by good feeding.

What Mr. Cockerill has to say on the subject of feeding the bred-to-lay hen is profoundly true; we are burning the candle at both ends when we feed her on stimulating foods, and it is superfluous to do so. But what he neglects to point out is the necessity of feeding such a ration as will give her sufficient bodily nourishment and also allow her
to produce eggs. There are pullets to which
very ordinary ration would at certain periods
far too stimulating, notably when they first con
into production, and during the flush month
These are the birds which lay the double-yolk
and shell-less eggs, and which suffer from pr
lapsus. I have often heard it said that doubl
yolked eggs are the result of too stimulating foo
and it is sometimes described as the result
bad feeding. This is not quite correct. Feedi
may be, as far as our knowledge permits, abs
lutely correct, but it may affect the abnorm
individual, and there are always some of the
in every flock. When a pullet is laying doubl
yolked or shell-less eggs it is better to remove h
for the time being, reduce the quantity of ma
fed, and the grain feed should be wheat and oat
no maize should be given.

Mr. Cockerill will recognise that a prolific laye
if the food is not sufficient for both bodily mai
tenance and production, will draw heavily upon h
bodily reserves, and this in some cases mea
complete exhaustion. What we are still ende
vouring to accomplish is to find the ration whi
will adequately nourish the bird and enable her
produce the eggs and reproduce healthy vigoro
progeny.

Mr. A. F. Peet writes as follows :—

"It may interest you to know that I have tried the Welli
ham mixture with a few cockerels I had remaining after
season's hatch, and the results were excellent. The increase
weight after 14 days' feeding being from 1 to 1½ lbs. The
was no further increase to speak of, so I take it that ab
14 days' feeding with this forcing mash is about the effect
period, and that a continuation of it will not result in
appreciable increase in weight in proportion to the 14 da
result."

Mr. Peet is mistaken in regarding this as
"forcing" mash, there is nothing forcing abo
it. The Wellingham mash was fed from the sh
with the most successful results. He tried it at
much later age, with the result that no appreciab
increase occurred after a fortnight—quite s
There is a point in development reached, when
ceases or is much slower, because the maximu
has been reached or almost so. The mash is n
forcing, it simply allows the chick to reach t
maximum more quickly, because it supplies what

UTILITY DUCK CLUB NOTES.—Continued

her told me that with the aid of this manure she h
grown the finest crop of potatoes she had ever ha
having lived in Ireland there is not much she does
know about potatoes.

Much more might be said about those four da
I'm pretty sure that the Editor, my readers, and m
undoubtedly myself, do not want it, so I will just a
that anyone who would like a photo of the U.D.
Stand for the 1925 Dairy Show can have it, post fr
on sending me a P.O. value 2s. 9d

Next month I shall hope to write something m
practical, and can imagine the sigh of relief whi
the remark will have produced from anyone who h
waded thus far.

ded for the purpose. When I drew up the mula at the request of the Council, the purpose s to supply as far as possible all the elements ded for the rapid and healthy development of chick. Mr. Peet may be sure of one thing, he mash had been forcing, then the mortality uld have been very high. It was considerably ow the normal, and all the birds concerned were ticularly healthy and well developed.

n answer to a question from Scotland, the ter has been using a mash composed of Oatal, Indian Meal, Parings, Bran, Barley and od Meal, 15 per cent. The egg yield is not isfactory, and he asks if I think that he is ng too much blood meal; having in view the h albuminoid content. I do not think this is case. Blood meal is not a good egg producer, l the mash is very deficient in the lime phosites. I would suggest that he add 5 ozs. of mineral mixture so often advised in these umns to every 10 lbs. of mash, or use fish meal meat and bone meal in place of the blood meal. s should give improved results.

THE GUARANTEE.

Vhat is the word "Guaranteed" Worth? Of rse one will say that it will depend on the sense s used. You have, for example, "guaranteed -egg strain, or gold medal strain," an adverment which is frequently used by one of the gest scamps who prey on the novice. But take n this sense. A member writes asking my nion on the following mash as a dry mash:— per cent. Fine Midds., 50 per cent. Biscuit al or Dust, 10 per cent. Ground Oats, 5 per t. Spice, 10 per cent. Meat and Bone Meal. at is guaranteed here, the quality of the indients, the mash itself, or what? And how is guaranteed? The word is used in the most urd sense. Why is the spice included? **Spice always injurious** if used continually. If the d is of good quality and the mash properly anced, no other aids to egg production are ded, and the inclusion of spice, which is nothing an irritant, is positively injurious in the case really good layers. If anything is wanted as aid to digestion, the safest and surest thing use is mustard. This mash is expensive in extreme, and wholly unsuitable for economical production.

Correspondence.

APPLIANCE MAKERS.

To the Editor of "Eggs."

Dear Sir,—I have read the various letters that have appeared in "Eggs" about appliance makers still keeping to old ideas relating to poultry houses, brooders, etc. The reason is, I suppose, that experimenting costs money, and poultry farmers are very backward about taking on anything fresh, although it may be the best thing ever known.

The appliance maker knows he can sell the ordinary houses, but is not so sure about those that are fitted with new ideas.

During the last 20 years the only thing that has been done are larger houses, but not healthier ones. Bigger flocks that use up the life-giving oxygen, that is not replaced only by chance, is not conducive to health.

If we were always sure about the weather just a roof with open side would be healthy.

What we have got to aim at, and it is quite easy, is to replace the air in the whole house continually without the inmates knowing it.

We say it is entirely in your own hands, if any member of the S.P.B.A. brings his card, and cares to see for himself, he is welcome to do so. We call ourselves the Scientific Poultry Breeders' Association, why not go a step further, and include Scientific Appliances as well?

Yours faithfully,
R. A. DIXON.

ROUP.

To the Editor of "Eggs."

Sir,—In your published report of the S.P.B.A. General Meeting, the Liverpool Branch suggested the Ministry of Agriculture Scheduling Roup. No seconders!

In my opinion there is plenty of skill in the poultry world to deal with all disease problems especially if tackled from the view point—*Cause*. If there is an outbreak of 'flu in the village are all the villagers killed forthwith? No!! The local doctor is called in, and generally he puts matters right. The great need in every district is an "advisory fancier" of *long* experience and practised in treating sick birds, say for a small fee of 2s. 6d. a visit.

In my experience I have come to one conclusion—outbreaks of disease are due to faulty stock or management—very often both. The amount of stimulating food given for egg production to-day by some is enough to make any bird ill.

(Continued at Foot of Previous Column).

ood management, observation, *strong stock*, and ne should experience much trouble.

resent-day birds are so highly *bred-to-lay* that *ing-to-lay* on stimulating food is foolish and erfluous. We thus burn our candle at two ends.

have underlined "*strong stock*" as I find by exence that birds bred from high producers have not resistant powers of moderately-bred stock.

Yours truly.
F. COCKERILL.

EGGS AND MEAT.

To the Editor of "Eggs."

Dear Sir,—I was pleased to see Mr. J. Meekings' article on above, as you know I have always been in favour of the heavy breeds; and my experience has shown me that they can give quite as good an average for the year as the light breeds, and certainly a better one for the winter when so much better prices are obtainable.

The markets here are about the worst in the country, and all my eggs go to London, but cockerels are all bought by an Exeter dealer, and the price for this year has averaged 1s. 6d. per pound for birds weighing about 3lbs. at 11 or 12 weeks old—say 4s. 6d. each, which shows a good profit. I might say this price was for 30th May onwards, as owing to damp and cold here we do not hatch before March.

Now as to breeds. I used to pin my faith on Light Sussex, which are good layers of a tinted egg, especially during winter, and for the London market, owing to White Flesh, the cockerels would fetch a better price, but now, after some years of rearing about equal numbers of each, I should unquestionably put Rhode Island Reds as the best. They are hardier, mature sooner, chicks rear better, and a larger percentage of the eggs are fertile. I hatch out strong chicks; they lay a good brown egg of a good size. More than half of my pullets raised this year are laying already a first-grade egg, and the cockerels, if properly fed, will reach three to three and a half pounds in eleven to twelve weeks. Also I find these hens are quite profitable to keep for the third year To test this, I kept 20 1922 birds and trapped them, and they gave an average of 157 eggs each for the three years.

The following particulars of a pen of R.I. Reds may interest your readers. They are not a picked pen, but the *whole* of the pullets were reared to maturity in 1924, and consisted of 146 birds, and were all trapnested for the year from 1st September, 1924, to 30th September, 1925. Some were killed or died, and their scores are not included:—The 140 birds left laid 27,309 eggs, an average of 182 per bird, and if the last 25 birds who start laying, and who have from one to three months still to make up a full year, are taken out, the first 125 birds' average would be 188 per bird. Of these birds 45 laid over 200 for a year, and six laid over 250 for a year, the two best laying 269 and 273 each. I very much doubt if any Light Breed of unselected birds can put up a better record.

Yours truly,
W. A. APPLETON.

VENTILATION.

To the Editor of "Eggs."

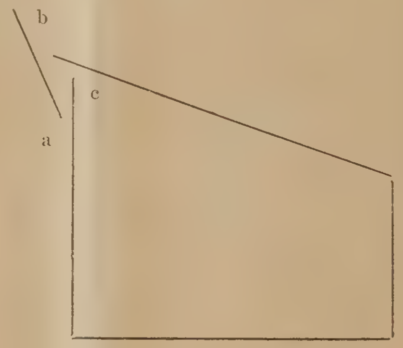
Dear Sir,—I was much interested in Mr. Somerville's article on Ventilation in "Eggs" of October 21st. I looked up his original articles in "Eggs" of October 22nd and 29th of last year, but got "knock out" when I came to the ridge ventilation. I quite sure in my district, with such a ventilator d ing a snowstorm in the night, many of the birds wo be covered with snow; and, of course, this a applies to rain. I quite agree with Mr. Tom Car when he says that Mr Somerville's system har entirely on the ridge ventilator, and would willin pay Mr. Somerville for any plan which would guaranteed by him. Mr. Carter says that some of Somerville's arguments in favour of the "Ape house are open to question. I hope he will deal w them in another letter before long.

Yours sincerely,
"SMALLHOLDER."

LEAN-TO TYPE OF HOUSES.

To the Editor of "Eggs."

Dear Sir,—Most poultry-keepers who have the le to type of house are bothered with the do draughts caused by wind blowing under the ho May I suggest the method of prevention, as shown the sketch:—



The idea is not only to prevent a down draught, b to cause an induced current when the wind is on t front of the house.

The aperture at "A" to be smaller than "B." T wind, striking the face of the house, will sh through "A" and leave at "B," so inducing a curre through "C."

With the hope that any critics will be gentle.

Yours faithfully,
JOHN R. SEED.

A MISTAKE.

Mr. A. K. Speirs Alexander, of Roughto Norwich, sends the following:—

> "Dear Mr. Newman,—A most unfortunate mistake occur in my advertisement (quarter page) in 'Eggs,' October 28 through a stupid slip of my own. It is stated that my Natio winning pen laid 1,140 eggs in **44** weeks, which should course have been "48" weeks. Could you possibly see y way to saying a word about this, as I am most anxious to appear to have intentionally made my pen seem better th it is."

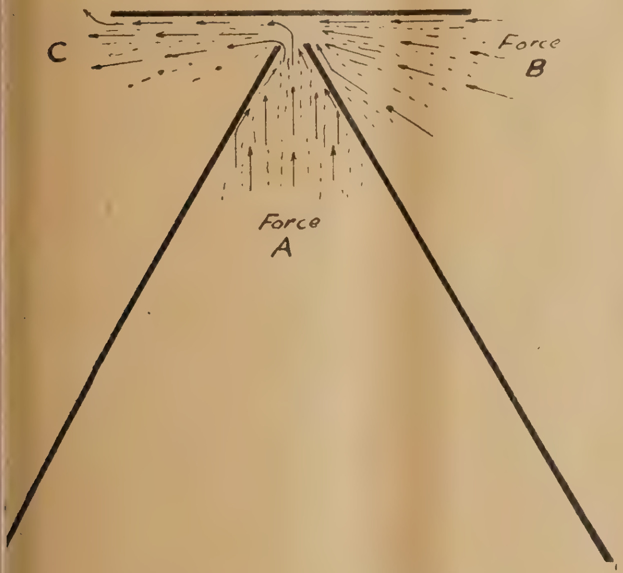
VENTILATION.

To the Editor of "Eggs."

Dear Sir,—In reply to Mr. Carter's query in the sue of November 4th, as to how to prevent an tlet (vent) becoming an inlet.

To most of what I have contributed on the bject, add the exhaustive article "The Importce of Proper Ventilation" and sprinkle it with e mass of correspondence evolved by those who preciate the possibilities of ventilation by inction, and one might say we have a fairly comehensive exposition of facts all pointing to the swer to Mr. Carter's question. Yet it seems— this case—to have "missed fire."

Perhaps the appended explanatory pictureagram will simplify the matter for Mr. Carter.



A. is an ascending force of heated gases.

B. is a force of atmospheric movement of varyg intensity. Then, with closed doors, the easiest th for B. is in the direction of C.

The easiest path for A. is to C., since B. offers resistance. Since A. is an ascending force there no chemical, physical, or mechanical reason why should prefer to beat it down in preference to ssing along the line of least resistance to C. nd, incidentally, since the total area of the air lets is less than that of the vent aperture on e B. side of the cone a "cushion" or buffer ould be created by any force acting on A. Subliary actions and reactions have already been ven elsewhere.

Mr. Carter is wrong in saying that my system ngs entirely on the louvre ejector. Neither is e principle **only** a theoretical exposition. The dian Wigwam, the lime kiln, etc., are typical actical expositions.

The louvre is not original, although till lately I was unaware of it. Mr. Randolph Meech employed it twenty-five years ago.

I am not quite sure of the exact meaning of Mr. Carter's final paragraph, in which he says that if I wish to exploit the matter commercially many would be willing to pay for plans and information if I would guarantee results.

Let us be quite clear on this.

It is a matter of indifference to me whether the poultry industry accept the system or not. My original contribution on the subject was **invited,** so that I could not have had any idea of commercial exploitation. It was offered as a simple solution to a prevailing difficulty, and has since been adopted with success by many readers.

Reference to the advertisement pages of "Eggs" will show that the system has been accepted, and applied to housing by a manufacturer who has an extensive knowledge and plant in poultry work, and an experience of thirty-six years standing. He would, I am sure, be quite willing to discuss privately the merits or demerits of the system, and since he himself accommodates over a thousand birds in houses of Apex design, he must know more about the **practical** value than I.

Many members of the S.P.B.A. have purchased plans, but none have ever suggested that I should guarantee results. Whether their intelligence has warranted the risk I am not prepared to say

To Mr. E. WIMBERLEY.

Your suggestion and diagram for reconstructing a lean-to type of house to a self-ventilating system appeals to me as an excellent method of making the best of a bad job. I have done something similar with four such houses it is my unhappy lot to be forced to still retain.

If the houses are very deep from back to front, say sixteen feet or more, the necessary pitch of the roof would render it an uneconomical procedure.

In any case, the perches are at the right end, and I have a foot of open wire-netted space at the bottom and a vent of about one and a half inches at the top.

Smoke tests will reveal an upward current of air, but I think that is the best that can be said for it. I doubt the advisability of having air inlets at the back on account of the possibility of getting a through draught.

Some correspondents have put two of these houses face to face and so made a span-roof type.

In the not-distant future I hope to give the details you ask for, but the position is this. With the launching of a new process a person may generally successfully "nurse his own baby," but it were far better that till the system has been established and proved by others sufficiently enterprising and courageous to do so—by means of houses purchased or built to plans supplied—and thus nurse my baby for me either to its death of impracticability or a living exposition of accomplished fact, that these details should not be published as exact and unalterable.

They have already been modified slightly at correspondents' suggestions after trial, and on all plans sent out they are definitely stated as those prevailing at time of issue. In no instance have I heard of a house proving unsatisfactory.

Thanks very much for your kind appreciation.

C. WINTHROPE SOMERVILLE.

TESTING EGGS FOR INCUBATION.

To the Editor of "Eggs."

Dear Sir,—Now that the incubating season is fast approaching, the question of testing the eggs will soon be under consideration, and it may be of interest to readers of "Eggs" to know a quick and simple method of testing.

The laborious method of taking each egg out of the drawer and putting it on the test lamp is, in my opinion, quite unnecessary, involving waste of time and considerable cooling of the eggs. If the testing is done at night or in a dark room, and a trestle placed in position to allow the egg drawer to be drawn out full—i.e., one end of the drawer on the trestle, and the other end in the incubator—an ordinary electric torch (1½ inches diameter, costing 2s.), manipulated underneath the tray right up against the perforated zinc, allows the whole drawer to be inspected and the infertiles, etc., removed, in under two minutes.

Yours faithfully,

E. ISMAY.

VENTILATION.

Dear Sir,—I found Mr. Somerville's article on "Ventilation" most interesting, but venture to offer criticisms on some points made by him.

I am in entire agreement with Mr. Somerville when he says that ventilation must be continuous and self-generating. He then states that ventilation begins at the bottom and ends at the top. Why, then, must the air-inlets be a little distance above floor level? Also, are we dealing with gases and atmospheres that are lighter than air, i.e., that naturally rise to the top? I think not. Carbon monoxide and carbonic acid gas (CO_2) are heavier than air. Their natural exit is through the floor.

Would not holes in the floor allow air to circulate through the litter, remove the heavier gases, assist in the removal of dust and comply with the axiom "from the bottom upwards?"

Again, he states that induced ventilation can be successfully applied to the vertical-sided span-roof building. Why then does it not apply to the "lean-to" type, which is half a "span-roof," always provided that the pitch of the roof is sufficiently steep?

The "huge and expensive hood in front" of a span-roofed house is admittedly unnecessary, but this does not apply to the lean-to roof, as it is put there to prevent rain beating in, and if pr perly designed does not prevent the induced a from getting out. Moreover, there is no questi of the roof lifting off provided that the air driv in has a road to get out by. A small openi at the lower side of the roof allows this, and th opening has the following advantages.

Under normal conditions it acts as an eject driving a layer of air along the underside of t roof and out at the higher end, thus producing partial vacuum in the house and drawing up t foul air. If the wind is blowing into the hous the direction of the current of air is merely r versed. Suitable "weathering" acts as a baff and eliminates eddies.

Lastly, sliding doors, unless fitted on roller are very liable to jam, either by swelling in w weather or by not being pushed back square. T cost and trouble in fitting rollers is more tha the cost of a pair of hinges, and a hinged door c be kept open by a simple "stop" operated one's elbow, or a hasp and staple. If construct to fold back flush with the side of the hous neither is usually required.

Yours faithfully,

E. ISMAY.

OUR FRONT COVER.

On our front cover this week is depicted "Wellin ham Wonder," a hen bred by Miss Malcolm and Mr Pember, which in her pullet year laid 285 eggs, average weight per egg being 2¼ozs.

What is also extremely important is the fact th this pullet laid 95 per cent. of *hatchable* eggs.

Miss Malcolm and Mrs. Pember have been inves gating this hatchability factor with great care, a we hope some day to be able to publish the results their research work in these columns. We belie we are correct in saying they have been able to demo strate conclusively what we mentioned eight years a on the front cover of "Eggs," that Hatchability w an inherited factor. Its economic importance we mu all recognise, and to be able to perpetuate this one's stock, is not only of extreme economic value the breeder himself, but the purchaser must al appreciate its value to him, especially if he conten plates breeding for heavy production.

Whether there is any correlation between hatc ability and rearability has yet to be determined, b it seems certain that the higher the percentage hatchable eggs produced, the higher the percenta of rearable chicks.

Like most of the Wellingham birds, "Wonder" h plenty of bone, and one is able to realise that the e producer need not be without substance.

"Wellingham Wonder" has the typical head of good layer, and some of our novice readers may ca to mark how well the lobes are developed. It is ve rarely that one sees in a good layer a poorly-develop lobe. The broken tail is an indication as to how s has visited the nest.

Opening of the Seventh Midland Federation Laying Test.

In spite of bad weather, a large number of isitors and friends attended the opening of the eventh Midland Federation Laying Test at Handsworth on Saturday afternoon.

Prior to the official opening a tour was made of he pens, and general admiration was expressed t the appearance of the birds, which have been ntered from all parts of the country. Local oultry breeders are very strongly represented, nd the appearance of their birds shows that hat Birmingham and Midland poultry breeders an face competition from any quarter.

The Chairman of the Midland Federation of Fur nd Feather Societies, Mr. W. H. Brady, in asking Mr. Tom Newman to declare the Test officially pened, said that their visitor needed no introuction. He was too well known, not only to oultry-keepers in the British Isles, but in all parts f the world.

Mr. Tom Newman said that he felt very real leasure in declaring the Seventh Midland Laying est officially opened. He thought that the work he Midland Federation had done was admirable, nd reflected the greatest credit on the Federation nd its officials. What had been done in the past ould encourage them to even greater efforts in he future, and he did appeal to them to aim at ven higher ideals. They wanted to develop not nly a great layer, but a great bird in the best ense of the word.

Mr. P. J. Hannon, M.P., in proposing a vote of hanks to Mr. Tom Newman, said that he regarded he work done by the Midland Federation of Fur nd Feather Societies as of the greatest national mportance. Later on he would give them some gures which showed how amazing had been the evelopment of the poultry industry. For the resent he would confine himself to welcoming and hanking Mr. Tom Newman, and expressing his wn appreciation at being with them once again nd seeing so many members present.

The official opening of the Laying Test was folwed by an excellent tea and concert at the New ns Hotel, Handsworth, nearly three hundred embers being present.

The Chairman, Mr. W. H. Brady, said that he uld only feel the greatest satisfaction at seeing ch a representative gathering. The Midland ederation was going on from strength to strength, nd new opportunities were continually opening front of them. The growth and success of eir efforts in the past called for a great change in the immediate future, and that was probably the last time at which the Laying Trials would be held on the existing ground. Next year he hoped that larger trial grounds and new equipment would be available. They had present with them that night Mr. and Mrs. Tom Newman, whose recent marriage gave the members of the Midland Federation an opportunity to show their appreciation of the great services both had rendered to the poultry industry. A set of silver entree dishes and cover were before him, and he would ask Mr. Hannon to present these to Mr. and Mrs. Tom Newman on behalf of the Midland Federation.

Mr. Hannon said he had never been faced with a more pleasing duty. Mrs. Newman was one of his oldest friends, and it was a great privilege and joy to meet again in such pleasing circumstances. In asking their acceptance of the gift on behalf of the Midland Federation he wished them long life and every happiness.

Mr. Albert H. Brain, Hon. Organising Secretary, Midland Federation, speaking in support, said that in the course of his many years' work for the Midland Federation, he had received the constant support and assistance of Mr. Tom Newman. Mr. Newman and the Scientific Poultry Breeders' Association had been a tower of strength in the organisation of the poultry industry, particularly in regard to the National Poultry Council, and he was glad to take that opportunity of expressing his appreciation.

Mr. Newman, in reply, said that he had been married for five months, during which he had done a good deal of listening-in to speeches, but he was afraid he felt it very difficult to express his thanks that night; but he did thank them all, on his wife's behalf as well as his own, not only for the gift, but for the kind thoughts and friendly appreciation of which the gift was an expression. They had referred to his services to the industry, he would like to take that opportunity of saying that at no time had he been more optimistic as to the outlook and possibilities of the poultry industry.

Mrs. Newman, from whom a speech was enthusiastically demanded, said she had one word for all the unmarried ladies present. If they thought of getting married, she would advise them to strike a bargain with the man that there should be no speeches for her. Mr. Hannon had referred to their old friendship. It was due to the encouragement and support of Mr. Hannon that she had taken up the work of instructress in poultry husbandry in Ireland, and it had been a source of the greatest pleasure to hear that on her first visit to Birmingham she should have renewed that old friendship. It only showed how small the world was. (Loud and prolonged cheers, meanwhile musical honours were afforded Mr. and Mrs. Newman.)

The toast to the President, Mr. P. J. Hannon, M.P., having been proposed by Mr. Lawrence

Tipper, President of the Birmingham Chamber of Agriculture, Mr. Hannon, who was received with musical honours, said that the Midland Federation was doing good work among the people in the Midlands, who were worthy of very considerable assistance. It was a wonder to him that the poultry industry did not receive greater attention in the economy of the State. The Midland Federation received no outside assistance whatever, it owed all it had done to its own initiative and energy.

The economic importance of the poultry industry was considerable. The annual value of poultry production was in excess of the whole wheat output of the country. The importation of poultry, meat alone, taking the figures over the last few years, equalled an annual charge of 1s. 7½d. for every man, woman, and child in the country, whilst the importation of eggs showed that we brought from abroad eggs to the total of 7s. per head each year, or 35s. per family. Every penny of that money, equalling £11,320,000 for the first nine months of this year, ought to be spent on eggs and poultry produced at home. There was also the ugly question of eggs not in the shell, eggs in liquid form imported in barrels and other insanitary contraptions. He wondered if it was realised that from China alone during the first nine months of this year we bought £2,576,956 of liquid eggs. This represented a very doubtful commodity, and he wondered if the consumer always knew what he was eating. In giving such splendid assistance to the Midland Federation, the Birmingham papers have helped forward very materially one of the most important industries in the country.

Mr. Broughall, in proposing the poultry industry, said he was going to do so in an unconventional way by appealing to all of them as members to put the utmost enthusiasm into their work. Only in that way could the work of the Midland Federation and the work of the poultry industry be continued, and the utmost obtained from it.

Mr. E. J. Davy, who proposed the Midland Federation, its work, its officers, affiliated societies and members, said that there were three things in Birmingham of which Birmingham people could be justly proud. They had the best reference library out of London, they had the best repertory theatre in the country, and they had the Midland Federation. That in its way was the equal of the other two as a demonstration of civic activity and enthusiasm. It was built on a foundation of individual members, and the driving force of the Federation as a whole would depend on the amount of enthusiasm shown by the members themselves.

Mr. Hickling, J.P., representing poultry interests from Smethwick, expressed pleasure in again testifying to the valuable and instructive educational work organised and disseminated by the Midland Federation, who, through thei Organising Secretary, Mr. Brain, had accomplished great work under immense handicap.

We hope to see even greater progress in th future. The time was now ripe when every poultr keeper should become a member of a poultr society, and that poultry society link up with th Federation, so that each and everyone could clai adequate representation in national poultry affairs It was stated that the Sixth Midland Poultr Festival would take place in Bingley Hall nex January 7th, 8th and 9th, 1926, and many ne features introduced, which it was hoped would b attended by every person who was interested i developing our home food supplies and make u independent of the foreigner. It was the Federation's aim to again organise a Prize Fund Schem in order to try and get together the necessar finance for the New Midland Laying Test, whic was estimated to cost about £5,000, an entirel new plant on a new site. In order to meet th wishes of many affiliated societies the Midlan Federation had recently purchased 700 show pen for exhibition work. These would be hired out fo a normal charge to affiliated societies. It wa agreed by all that, not only had another mileston been passed in Birmingham and Midland poultr progress, but the whole movement had taken new and increased life which would strengthen i considerably to materialise the numerous ideals i had in hand to develop.

The Hon. Organising Secretary, Mr. Albert H Brain, was also pleased to announce that it wa only the day previous that he had had a long tal with Dr. Innes, the technical chief of the Birmingham City Education Committee, and had got the to grant facilities to enable a school in each loca area to be used for the purpose of instruction an poultry education, a branch of the Federation' activities which had been considerably curtaile owing to lack of opportunity and accommodatio in the past. (Loud and prolonged applause.)

NEED FOR EXPANSION OF THE POULTRY INDUSTRY.

Mr. HANNON'S "STARTLING" FACTS ABOUT IMPORTS.

Surprising figures in relation to the importatio of poultry and eggs into this country were give by Mr. P. J. Hannon, M.P., on Saturday, in response to the toast of his health (submitted b Mr. Lawrence Tipper) at a gathering at the Ne Inns Hotel, Handsworth, which followed the officia opening of the seventh egg-laying test at th instructional poultry farm of the Midland Federation of Feather and Fur Societies.

Mr. Hannon (who is President of the Federation) spoke of the useful and practical work whic had been performed by the organisation. It wa curious reflection, he said, that it did not receive y sort of assistance from the agricultural com- ttees of the County Councils, or from any body atever, and one was entitled to wonder why the ultry industry, considering its relation to tional economy, had not received more con- uous, consistent, and sympathetic support from State. It was one of those industries which ght to receive on its merits adequate public pport. The magnitude of the industry could be lised when it was understood that its output, n in its present disorganised condition, was ivalent in money value to the whole of the eat production of Great Britain. People did not lise it occupied a position of that significance. at opportunities there were for the expansion the industry were apparent when the import ures were studied. In the first nine months of s year we imported poultry of the value of ,382,000. In the first nine months of 1923, 24, and 1925 we imported 3½ million pounds rth of poultry, a sum equivalent in that 27 nths to 1s. 8d. per head of the population of at Britain. It was easy to see, therefore, if the application of scientific and organised rt, we could produce even 50 per cent. of that ount, by how much we should be increasing national wealth. In regard to eggs, the figures re still more startling: In the first nine months this year £11,320,000 worth of eggs—equal to 7d. for every member of the population—were ported. He estimated that for the whole year ry man, woman, and child in the nation would 7s. for imported eggs. That was a fact of h significance that every interest that aimed at king our economic situation better ought to give e and thought to the question. During the ne nine months £2,576,956 worth of eggs not the shell were imported from China. He ught most thoughtful people would say they ferred even a smaller quantity of British eggs n a doubtful commodity that came from China.

Roup.

My Experiences and Ezperiments.

(By **JOSEPH THOMAS, Chemist and Pedigree Poultry Breeder**).

During the past forty years I have had innumerable cases of roup brought to my notice. Individual and pedigree birds have been brought to me for special treatment. Commercial poultry farmers, with hundreds of birds affected, have consulted me in their difficulties. I will give a brief outline of my varied experiments and results.

To me the difficulty is not so much finding a cure, for these are many and varied, but in finding a preventive which can be given without injury to the birds, or a curative treatment which will not result in dooming the birds as egg producers

Perchloride of mercury, sulphate of copper, silver nitrate, and formaldehyde all effect comparatively quick cures, but my experience with these proves conclusively that the birds so cured are never a success as egg producers.

Roup, as generally understood, is a catarrhal condition characterised by a discharge of an offensive nature from the nose. The discharge is at first thin and watery, and later becomes thicker, gluing up the nasal apertures. This is usually accompanied by a fungus in the mouth, sore head and eye trouble.

My advice to the commercial poultry farmer or the breeder with a large stock infected is to isolate the worst cases for individual treatment. Carry out a thorough disinfecting of all the poultry houses, burning all the litter and sprinkling Izal powder on the floor before replacing with fresh litter. The poultry houses should be sprayed at night with a suitable antiseptic. Use a good antiseptic in the drinking water, together with a tonic in the mash feed. I do not recommend mineral antiseptics in the mash, as they lower the food value and destroy the vitamines.

I give below two formulae which are frequently used in the drinking water:—

No. 1: Sulphate of Iron, 5.4 per cent.; Sulphate of Copper, 4.6 per cent.; Iodine, 2 per cent.; Pottassium Iodide, 2.45 per cent.; and water to 100.

No. 2: Menthol, 0.5 per cent.; Eucalyptol, 0.5 per cent.; Formaldehyde, 10 per cent.; Spirits of Wine, 20 per cent.; Glycerine, 5 per cent.; Essence of Garlic, 0.5 per cent.; Thymol, 0.5 per cent.; Water to 100.

No. 1 I find all right for occasional use, but its continued use causes liver and digestive trouble, and eventually the loss of many birds.

No. 2, although slower in action, gives the desired results without causing any ill-effects

For individual treatment of birds I syringe the nostrils with a solution of carbonate of soda. Strength, one teaspoonful in one pint of warm water. Then I syringe with the following oily solution:—

Pure Medicinal Creosote, 2 drachms; Eucalyptol, 2 drachms; Pine Oil, 2 drachms; Cod Liver Oil, 4 drachms.

(Continued at Foot of Previous Column).

o make this injection procure a hard rubber nge with a small nozzle. so that the nozzle can be rted into the nasal aperture. Force the liquid ugh the nostril so that it emerges from the aper- in the roof of the mouth. Should the eyes be cted, I remove as much as possible of the cheesy ter from under the lids and apply the following ment:—

otinate of Silver, 10 per cent.; Mercuric Oxide, 2 cent.; Vaseline to 100.

emove the fungus in the mouth with a dull or bone e, and apply either silver nitrate or sulphate of .

trust that these few simple and practical experi- its will be of interest and use to other poultry- pers who may come up against this devastating rge.

Answers to Queries.

Continued.

H. V. (South Wootton) writes that he has 20 pure-bred R.I. Red pullets. He knows nothing about fowls, but thinks he will be able to make a nice profitable hobby of them. The birds are now seven months old, and he has only had two small eggs from them. He had to feed them on mixed corn until September 30th, and since about the middle of October he has given them a special laying mash, and mixed corn. I expect it will be some time before these birds get into full production if they have only been fed on mixed corn, and I would suggest to my correspondent that he makes up the following mash :—1 lb. bran, 1 alfalfa meal, 4 middlings, 1½ maize meal, ½ Sussex ground oats, and one fish meal or meat and bone meal, and give the birds 2½ ozs. of the above per bird, weighed when dry, as the morning feed, and at night give them equal parts kibbled maize and wheat as the grain feed. More than this he cannot do. He must be certain that the offals (bran and middlings) used in the mash are of good quality, and that the meat and bone meal does not contain a high percentage of bone.

G. H. (Barnsley) sends me a sample of clover meal at 12s. 6d. per cwt. This is very poor stuff and not worth the money, as it is chiefly the residue from the threshing of clover for seed. The sample of ground oats he sends at 16s. cwt. are not "Sussex" ground, but are of fair average quality, and might be used in place of Sussex ground oats if nothing better can be procured, but as the S.P.B.A. can put on rail such an excellent sample in not less than five-cwt. lots at 13s. per cwt. it would surely pay "G. H." to buy through the Association. The fish meal at 21s. 6d. cwt. is an excellent one.

"New Beginner" (Pilsley) writes that he has a Leghorn pullet which has dropped at the abdomen through laying, and would like to know how to go on with treatment if any others should suffer from the same trouble. He also requires a good method of whole-day feed ration, and how to give mash and grain. With regard to the Leghorn pullet. This is a case in which nothing can be done, the bird may continue to lay, but he cannot breed from her. I am not quite clear whether my correspondent means that the bird has a dropped abdomen or there is prolapsus of the oviduct. If it is the latter the best treatment is to wash the part first with a warm antiseptic solution, such as one per cent. Izal in water, then wash with alum and water or even strong cold tea, and gently replace the part ; smooth out by the finger into its natural position, mopping the vent again with alum and water. Place the bird in a coop and keep her quiet, giving her some laxative food. With regard to mash feeding. Give the mash in the morning—approximately the birds require 2½ ozs. per heac weighed when dry. This might consist of : 1 lt bran, 1 alfalfa meal, 4 middlings, 1½ maize mea ½ Sussex ground oats, and one meat and bone me or fish meal. If potatoes are available they coul be used in place of the Sussex ground oats an maize meal. "New Beginner" must judge th amount of food required by the amount the birc consume. If they do not pick it up cleanly i about a quarter of an hour then reduce the amour the next day. At night the birds should be give a feed of 2 ozs. per bird of grain as the last fee about a quarter of an hour before they go t perch, preferably of equal parts kibbled maize an wheat, but the quantity must be judged by th amount consumed rather than by any definit weight, but they should have at least 2 ozs. p bird of grain as the last feed at night.

A. G. L. (Starcross) sends samples of middling or sharps, quoted at 11s. 6d. per cwt., and anoth sample quoted at 9s. cwt. That at 11s. 6d. ridiculously dear, and not worth the addition money, but that at 9s. is not hardly good enoug to feed ; it contains nearly 50 per cent. bran. (the two samples of meat and bone meal he sen one at 15s. and one at 20s. cwt. Here again the is nothing like the difference in values, and I wou advise my correspondent to buy that at 15s. cwt

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POST-MORTEMS.

S. The Sussex pullet was affected with fat degeneration of the liver and kidneys, the actu terminating cause being uraemic poisoning from la of kidney function. The cause of these degeneratio is unknown. the propensity to lay on fat, and for t organs to become degenerated and fatty, seeming being due to some individual idiosyncrasy, rather th to any particular error in the dietary.

A. J. B. The post-mortem examination of t R.I.R. pullet showed that there was intense infla mation of the stomach and bowels, such as would the case in poisoning by some irritant poison, as us for rats, etc. It is quite possible that some of t poison laid down was carried away by a rat, dropp and subsequently picked up by the bird ; she havi got it, I should estimate within about forty-eig hours.

R. and M. The post-mortem findings were same in all three of the pullets, A, B, and C, vi inflammation of the crop, proventiculus and kidne and congestion of the liver, and, therefore, it reasonable to surmise that the cause was the same each. These findings are quite consistent with pois ing by lead or other metallic poison, the other m likely being arsenic (rat poison, sheep dip, we killer), but this could only be accurately determi by chemical analysis ; although in these cases I sho suspect lead, as putrefaction had already commenc arsenic, on the other hand, having a preservat effect on the cadaver and delaying putrefaction.

Scientific Poultry Breeders' Association.

ull particulars of membership will be sent by return on pplication to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

INCOME TAX.

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mportant Note from the Honorary Solicitor.

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n important decision in the Scotch Courts in Appeal against assessment under Schedule 'D' Income Tax was given in the Court of Sessions.

HE Court ruled that the Commissioners of ome Tax in assessing a Poultry Farm upon ich, in addition to Poultry Farming, sheep were zed were incorrect in the assessment of edule 'D.' The Judges held that Poultry ming in this case was Husbandry and further Income Tax should be assessed under Schedule ' the same as an ordinary Farmer whose Income is assessed at a fixed sum similar to the ome Tax on land.

HE decision of the High Court of England has n delayed and it is not expected to be heard three or four months. This delay is much to regretted in view of the urgency which demands Inland Revenue to hasten forward their Appeals ch causes the uncertainty in the Poultry ustry.

OUNSEL'S opinion has been sought as to what uld be the course for Poultry Keepers to adopt. nsel's opinion is that Poultry Keepers, if atisfied with the assessment, should give ce of Appeal immediately on Notice of Assessnt being given by the Commissioners. If any ome Tax be paid by Poultry Keepers it should be paid under protest. It is hoped that ltry Keepers may obtain repayment of Tax if l under protest. Assuming that Income Tax not paid under protest the Inland Revenue may approached at a later moment to refund the which has been collected under the assertion he Inland Revenue that Poultry Keeping was Husbandry.

nyone in doubt as to their Income Tax should e without delay to the Editor.

FOOD PURCHASE SCHEME.

At the Stand this week we shall have on show one of the finest samples of Sussex ground oats it is possible to obtain. The price is a little higher than we have been quoting, namely, 13s. 9d. per cwt., free on rail, in five cwt. lots, but the quality is so exceptional that we are convinced it is well worth the additional money.

Prices of Sussex grounds oats are slightly higher than last week. We are compelled to quote:—

BRISTOL: 13/- per cwt.
SUSSEX: 12/6 per cwt.
LONDON: 12/6 per cwt.

Special attention is drawn to the offer of maize germ meal at 10s. per cwt., f.o.r. This is an excellent sample, and strongly recommended.

The following meals can be supplied in 5cwt. lots and upwards of one kind. F.O. Rail:—

Fish Meal (Pure White)	**19/3**	**F.O.R.**	**London.**
,, ,, ,, ,,	**19/0**	**F.O.R.**	**Swansea.**
,, ,, ,, ,,	**19/3**	**F.O.R.**	**Tynemouth.**
,, ,, ,, ,,	**19/9**	**F.O.R.**	**Grimsby.**

Fish Meal with 2 per cent. oil content not at present available.

PRICES OF MASHES. Per Cwt.

	Layers.	Growers.	Breeders.
F.O.R LIVERPOOL	**11/3**	**11/3**	**11/9**
F.O.R. LIVERPOOL	**12/3**	**12/3**	**13/3**
F.O.R. LONDON	**11/0**	**10/6**	**11/6**
F.O.R. LONDON	**11/6**	**11/6**	**12/0**
F.O.R. LEITH	**10/9**	**10/6**	**11/9**
F.O.R. LEICESTER	**11/0**	**11/0**	**11/9**
F.O.R. KING'S LYNN ...	**11/6**	**11/6**	**11/9**
F.O.R. BELFAST	**12/9**	**12/3**	
F.O.R. BRISTOL	**11/3**	**11/3**	**12/3**
F.O.R. SOUTHAMPTON ...	**11/6**	**12/0**	**12/0**
F.O.R PLYMOUTH	**12/6**	**12/9**	**12/6**
F.O.R. ABERDEEN	**12/3**	**11/9**	**13/9**
F.O.R. HARROGATE ...	**12/6**	**12/6**	**13/6**
F.O.R. GLASGOW	**12/9**	**12/9**	
F.O.R. STAFFS.	**11/6**	**11/6**	**12/6**

Sussex Ground Oats F.O.R. London: 12/6 per cwt.
,, ,, ,, F.O.R. Sussex: 12/9 per cwt.
,, ,, ,, F.O.R. Bristol: 13/0 per cwt.

WEIGHT OF BIRDS.

Last week I referred to Mr. Parnell's resolution in reference to the registration of the weight of birds in the Annual Register. I have received the following letter from a Northern correspondent:—

Dear Sir,—Noting the resolution *re* weight of hens in Registered Breeding Pens, I naturally wondered how my own birds would stand the test, so I went down this evening into Pen 1 and weighed the following The records are according to S.P.B.A. Standard:—

Hatched.		Hen.	Full year egg record.	Winter Record.	Weight of Bird. 30th Oct., 1925. lbs.	ozs.
1924		A	246	57	3	14
,,	*	B	236	54	3	10
,,		C	272	67	4	8
,,	†	D	220	49	5	2
,,		E	247	56	3	10
,,		F	246	55	3	14
,,	*	G	268	66	3	10
,,	*	H	237	65	4	0
,,		I	253	59	4	2
,,	*	J	265	57	3	9
,,	*	K	268	66	3	9
1922		L	276	76	3	8

† Nearly through moult; others in full moult. Egg weights over two ounces in every case.

Hen (L) (last one on list) has laid three full seasons, and is dam of eight pullets hatched 1924 with average for year just ended of 251. Those marked * in list on other sheet are her daughters, and I note they, with one exception, are about the same weight as their dam

I should be pleased if you think any of them are too small for use as breeders; if you will run your pen through their line, and simply return sheet initialled If you can use the information "to point a moral" you are at liberty to do so.

Yours faithfully,

"NORTHERN FARMER."

The birds were taken indiscriminately—no selection either for large or small, but I imagine they are a fair sample. Third bird C has 287 for full pullet lay from first egg to moult, but only 272 according to S.P.B.A. rule for 12 months from first egg.

In answer to his question I would definitely cut out all birds under 4lbs. in weight. It would be interesting to know the weight of these birds when they commenced their laying career.

In my view it is a mistake to use as breeders any pullets which finish their first twelve months' laying, and have not gained in weight at least one pound during that period, for if a pullet loses in weight this can only be due to the fact that she is drawing heavily on her bodily reserves.

Take "C" in the above list, with a full year record of 272 eggs, and a weight of 4lbs. 8ozs. This would be my ideal breeder for a Leghorn. She is of good medium weight, not too heavy, and would not be too fine in bone.

She should produce, if well mated, pullets with plenty of staying power.

I do not wish to use the information given in the letter to "point a moral." It is but an expression of opinion. The maintenance of size is important if we are to have stamina.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

APPLICANTS FOR MEMBERSHIP.

Constable, A., Brooklands, Broxbourne, Herts.
Hanna, Mrs. W. A., Drumachose, Limavady, Co. Derry, Irel
Hawking, Miss E. J., Givendale, Grange, Ripon.
Miller, Miss L., Smalldale, Bradwell, near Sheffield.
Rose, Miss J. B., Outseats, Hardgate, Aberdeen.
MacDiarmid, N. (Junr.), Milton Farm. Couper Angus, Perth
Richards, W., c.o. Fairweather, Richards and Co., Rangoon.
Ruthven, Mrs., Lennoxholm, High Possil, Glasgow.
Spurway, V. P., The Gap, Cettery St. Mary, Devon.
Price G., New Queniborough, Syston, Leicester.
Tafft, Miss M., Oak Tree Farm. Saxmundham, Suffolk.
Scott, Foxwell B., The Manor House, Weasenham St. Peter
King's Lynn, No
Mitchell, J., Balmuto Poultry Farm, Kirkcaldy, Fife.
Kitchiner, Miss A. M., The Park Farm, Horseheath. Cambs.
Monaco, B. V. del, Ifold Lodge. Lowood, Sussex.
Doyle, E. V., Ball House P.F., Foulridge, near Colne, Lanc
Henfield, A., The Coppy P.F., Beamish, Co. Durham.
Overton, S. H., Eastlands, Boothby, Graffoe, Lincoln.
Spray, R. W., Rectory Farm, Beckingham, Newark-on-Trent.
Williams, G., Brynllofour Farm. Llanybyther, Carmarthen
S.
MacLennan, Miss A., Agricultural College Office, Lochmaddy.
Blacktin, J. W., 192, Tapton Hill Road, Crosspool, Sheffiel
Morley, F. J., Skillington, near Grantham, Lincs
Godwin, H., Green Lane Farm, Iron Acton, near Bristol.
Warren, Mrs. E. H., Hunter's Close, Downton, near Salisbu
Stringfellow, A., Coronation Villa, Standish Lower Road,
Wigan,
Woolford, F. The Retreat, Wootton, I.O.W.
Sutcliffe, J. A. B., Knowledene P.F., Mountain Rise, Maritzb
Elcock, B. K., Moneyrow Cottage, Holyport, Berks.
Clarke, Mrs. I. J., The Bungalow, New Road, Church Lane
near Bille
MacFarlane, G., Mansefield. Tillicoultry.
Brangham, W. T., 1, Brooking Field Terrace, Underwood,
Plymouth.
Woodcock, Miss E. G., St. Edward's School, Oxford.
Sims, H., "Sandhill," Park Lane, Reigate, Surrey.
Chambers, Miss I. K., The Quarter, Ballie, Downpatrick.
N. Ir
Chambers, H. L. The Quarter, Ballie, Downpatrick, N. Ire
Picton Warlow, F. J. C., Poplars, Ewyas Harold, Herefordsh
Hodson, T., White House, Glassonby, Kirkeswald, Cumberla
Wall, T. B. E., Old Hall Farm, Worsley, Manchester.

THE LIVERPOOL AND DISTRICT BRANCH.

The Sixth General Meeting of the above was held i Albany Room, at the Palatine Cafe, Liverpool.

In the absence of the chairman, Mrs. Douglas Kendal presided

The election of officers for the ensuing year took pla Chairman, Mrs. Douglas E. Kendall; Vice-Chairmen, M O. Crosthwaite, Mr. R. A. Currie; Secretary and Trea Mr. R. J. Thomas. Committee: Miss M. Cooper, M Handley, Mr. M. Robertson, Mr. W. N. Copeland, Mr. C. Mr. W. Connolly, Mr. R. Thomas, Mr. W. Burns. Aud Dr. J. P. Hall, Mr. P. W. Rowley.

At the close of the meeting Mr. Hamnett gave an inter paper, entitled "Winter Egg Production." Mr. Hamnett that he liked his heavy breed pullets hatched before 10th M and his light breeds before the 9th April. Of the light pullets he preferred the March-hatched bird, as the April May hatched generally "hang fire." He liked to have al fittings of his poultry houses removable, and plenty of lig the house. If the houses were dark the birds preferred to out in the cold than go into the darkness. The floors shou at least six inches off the ground.

Rats and mice were the principal spreaders of disease. advised creosoting as a means of ridding the houses of in Dry litter was most important. Bale straw was the ideal but bracken or fallen leaves were the next best. Peat moss too dusty and expensive; it is liable to block the nostrils o birds and cause them to get severe colds. His advice wa to ask the question as to how much it costs to feed a hen how much it costs to produce an egg.

He said that if you reduce the foodstuffs on account of a individual pullets which are a bit overfat you will clem remainder to death. You cannot give a growing pullet too food, and do not forget it is the right sort of food that the egg. Do not forget the green food is a most impo

(Continued at Foot of Previous Column).

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item: Cabbage first, white turnips second (Bullock Stone is the best variety), and swedes or mangolds third. Do not feed mangolds the year they are grown. It is very relaxing owing to the sugar it contains.

The headquarters of the branch are now the Albany Room, Palatine Cafe, Lord Street, Liverpool. There will be a lecture on the second Saturday of each month until March.

Members of the S.P.B.A. who are not members of the branch are cordially invited to the lectures.

ANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES.

he Council meeting was held in the Master Builders' Rooms, nt Street, Preston, on Saturday, October 31st, 1925. Present: J. Wrennall (President, who occupied the chair), Mr. T. ron, Mr. J. P. Willacy (Treasurer), Messrs. Rev. A. J. King, Braithwaite, T. Edmondson, J. Whalley, W. Foster, A. ne, J. Ashworth, W. A. Hall, C. Longbottom, Dr. J. E. m, F. Ashworth, D. Potts, H. Winstanley, T. H. Draycott, Birtwell, and E. Collier (Organising Secretary).

etters of apology for non-attendance were read from Mr. S. son (Chairman) and Mr. F. Thompson (Oldham).

inutes.—The minutes of the last Council meeting were read, rmed, and signed.

orrespondence.—A letter was read from Mr. F. Thompson plaining about the Show Entry Forms not being sent out. Show Secretary stated the reason for the delay was un- dable on account of advertisers not sending in their matter. stated Entry Forms are now in the hands of the Societies' etaries. Letters were read from Heywood and District .S. and Billington and District U.P.S. asking for particulars ffiliation. The Secretary stated these had been sent, but application for affiliation had not yet been sent in. The etary was instructed to write them again on the matter.

application from Leigh, Atherton and Tyldesley Societies, are holding a combined Show for a Federation Ribbon, was ted on the proposition of Dr. Helm, seconded by Mr. C. gbottom.

letter was read from Runworth Society respecting a member hat Society re his Income Tax. The Secretary stated he written for more particulars, and then he could refer it to N.P.C.

letter was read from Mr. W. Grove, tendering his resignation the Federation Council, owing to his inability to attend larly.

r. T. Edmundson moved, and Mr. J. Wrennall seconded, Secretary write Mr. Grove asking him to reconsider his sion.

ational Poultry Council Meeting held at London.—Dr. Helm a report of this meeting, going into full details (which had dy appeared in the press). He specially mentioned the cord of Performance Scheme," which the Government had osed putting into operation. A letter from the Government read at the N.P.C. meeting, stating they did not intend to n with the scheme at present. The N.P.C. requested their etary to write the Ministry, asking them to reconsider this, put the scheme into operation. The Lancashire delegates against this proposal, and pressed forward their own me, which was submitted by Dr. Helm. This the N.P.C red to the N.P.C. Laying Test Committee for consideration, co-opted Dr. Helm on the Committee. Mr. T. Barron then e on the report, and supported what Dr. Helm had said. was accepted on the proposition of Mr. Longbottom and ded by Mr. J. Ashworth. Arising out of this report was question of sending two delegates to the Marketing Confer- to be held in London next January. Mr. Walker and J. Wrennall were elected to attend, but if Mr. Walker is ding on behalf of the National Poultry Council on account im being Vice-President of that body, it was decided Dr. a should take his place.

vertising Eat More English New-Laid Eggs.—The Secre- was requested to apply to the National Poultry Council he use of blocks that had been purchased, for posters, with ew to getting an estimate for printing so they could be ibuted to shopkeepers in Lancashire, on the proposition of C. Longbottom, seconded by Mr. T. Edmondson.

counts.—The accounts submitted for printing, etc., were d on the proposition of Mr. J. Ashworth, seconded by Mr. A. Hall.

b-Committees' Reports.—Educational and Propaganda.—Mr. dmundson reported on behalf of this Committee. He stated ommittee had been considering the best method of dealing the new panel of judges, which would be issued next ary. They recommended that Mr. J. Whalley and the Secretary scrutinise the list which will be sent to the judges and hand them over to this Committee. They also recommended that a fee of 5s. per annum be charged anyone applying to be put on the panel, this fee to apply to the already existing judges, who will also be asked to fill up the new form, which must be returned to the Federation Secretary not later than November 30th. 1925, or they will not be eligible for the next year's panel

Finance.—The Treasurer (Mr. J. P. Willacy) reported on behalf of this Committee. He said the bank balance, after allowing for the accounts passed for payment, was about £175.

Laying Test.—The Secretary reported on behalf of this Committee: There are in the Large Breeders' Section 86 pens, as follows:—W.L. 32, W.W. 23, R.I.R. 18, L.S. 4, B.L. 7, Anconas 2, and in the Small Breeders' Sections (single birds):—W.L. 15, W.W. 14, R.I.R. 6, B.L. 6. A total of 299 birds against 296 last year. Of these, three societies are running their test in conjunction with the Federation—Preston, Darwen and Rawtenstall. These societies will receive 33 1/3rd per cent. refund of the total fees paid by their competitors.

Show.—Mr. F. Ashworth, the Show Secretary, reported on behalf of this Committee. He said the entry forms had been sent out, and the arrangements were well in hand. The Show is being held on November 28th in the Territorial Riding School, Bromwich Street, Bolton. Entry forms may be had from the Show Secretary, The Clough, Halliwell, Bolton.

Under Any Other Business.—Mr. J. Whalley suggested the competitors in the Federation Test might consider exchanging stock at the end of the competition. Say a competitor had three birds with good official records he might be prepared to exchange with another competitor with similar records, and each would be getting new blood. Dr. Helm suggested this might be done through the Federation Secretary on the payment of a small fee. This was referred to the Laying Test Committee for consideration on the proposition of Mr. C. Longbottom, seconded by Mr. F. Ashworth.

Annual General Meeting and Prize Distribution.—The Annual General Meeting will be held at Preston on Saturday, December 12th, 1925.

This closed the business, and the meeting terminated.

E. COLLIER, Organising Secretary.

FOWL POX.

To the Editor of "Eggs."

Dear Mr. Newman,—With reference to Mr. Ansell's formula for fowl pox. Surely there must be some grave error.

Mr Ansell prescribes two and a half pounds Copper Sulphate to eighteen gallons drinking water; this is equivalent to rather more than six grains per ounce. As a hen will drink from two to four ounces per day, according to climatic conditions, this means she would consume from twelve to twenty-four grains per day.

In large doses Copper Sulphate is a powerful irritant poison, and as a lotion for application to ulcers it would only be used at the rate of three grains per ounce. Moreover, it is stored in the liver for long periods; it is easy to imagine what would be the cumulative effect of this dose.

Most veterinary authorities, including Major Saunders, if I may be allowed to mention his name, advise one drachm to one gallon of water, equivalent to about half a grain per ounce

My advice is to give the formula a very wide berth until a more authoritative statement is made.

F. W. WAIT.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, NOVEMBER 13th, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is more freely offered, but supplies are still on the small side, and, with a good demand, realises higher prices, the average quotation being 11s. 4d. per cwt. as against 11s. 1d. last week. Imported wheat is in small supply and recent rates are fully maintained, No. 1 Manitoba being dearer at Hull and London. Trade for home-grown malting barley is slow, except for finest parcels which are scarce, but average quotations are unchanged on the week. British feeding barley is in slightly better demand at about late rates and averages 8s. 9d. per cwt., while imported meets a dull trade at slightly easier prices. Moderate supplies of home-grown oats meet an irregular trade, but average prices over the markets reported are little changed at 9s. 5d. and 8s. 9d. per cwt. for white and black varieties respectively. Imported oats are scarce and in moderate request at about late rates. Maize is slightly dearer at Bristol and Hull, and Argentine now averages 8s. 9d. per cwt.

Bran is in better demand and dearer at most markets, averaging £7 6s. 6d. per ton as against £7 5s. last week, while coarse middlings generally sell at late rates, the average price being £8 12s. 6d. per ton. Meals are in fair request, and mostly realise recent prices, but barley meal is cheaper at London and Bristol. Oil cakes generally meet a slow trade, linseed cake being unchanged in price on the week, while cotton seed cake is cheaper at most centres.

MILLERS' OFFALS.—Bran (British): Bristol, £7 12s; Hull, £7 12s; Liverpool, £7 10s; London, £7. Broad Bran: Hull, £9 2s; London, £8 10s. Middlings—Fine (Imported): London, £9 2s; Coarse (British): Bristol, £9; Hull, £9; Liverpool, £8 10s; London, £8. Pollards (Imported): Bristol, £7 10s; Hull, £6 15s; London, £6 17s. Rice Bran: Bristol, £7 10s; Liverpool, £7 5s. MEAL.—Barley Meal. Bristol, £9 10s; Hull, £9 10s; London, £10. Maize Meal: Bristol, £10 15s; Hull, £9 8s; Liverpool, £9 15s; London, £10. Maize Meal (S. African): Bristol, £9 7s; Hull, £8 10s; Liverpool, £8 7s; London, £8 15s. Maize Germ Meal: Hull, £9 15s; London, £9 5s. Maize Gluten Feed: Bristol, £11 7s: London, £9 15s. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 2s; London, £9 12s. Bean Meal: Bristol, £13 15s; Hull, £11 3s; London, £12 5s. Fish Meal: Hull, £20 10s; Liverpool, £20 10s; London, £20.

EGGS AND DEAD POULTRY.

English eggs are very scarce and are much dearer, while Irish and most continental varieties have again advanced. Little trade is recorded in dead poultry at present, but fowls are a shade firmer at London.

Week-end Prices—Eggs (per 120): British, 32s 0d; Irish, 31s 3d. 29s 3d; Danish, 30s 9d, 29s 3d; Dutch, 29s 6d, 28s 0d; French, 25s 0d, 23s 0d; Belgian, 27s 3d, 26s 3d; Italian, 24s 3d, 23s 0d; Canadian, 21s 0d, 20s 0d; Lithuanian, 17s 6d, 16s 6d; Polish, 15s 6d, 15s 0d; Chinese, 15s 0d, 13s 6d; Russian, 16s 6d, 12s 6d; Australian, 23s 0d, 22s 0d; South African, 22s 0d, 19s 6d; Argentine, 16s 5d, 15s 6d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 6d, 1s 2d; Irish, 1s 1d, 1s 0d; Others, 1s 3d, 1s 0d. Ducks, 1s 2d, 1s 0d; Geese, 1s 0d, 10d. Turkeys, 1s 5d, 1s 2d.

EGGS.

Per Doz.—Ashford: First, 3s 9d; Second, 3s 6d. Birmingham: First, 3s 4¾d; Second, 3s 0d. Bridgwater: First, 3s 9½d; Second, 3s 7d. Chelmsford: First, 3s 6½d; Second, 3s 4½d. Colchester: First, 3s 7¼d; Second, 3s 0d. Doncaster. First, 3s 6d; Second, 3s 4d. Dorchester: First, 3s 7d; Second, 3s 5½d. Exeter: First, 3s 3d. Hereford: First, 3s 6d. King's Lynn: First, 3s 2d; Second, 2s 10d. Llandilo: First, 3s 3d; Second, 3s 2d. Mold: First, 3s 3d; Second, 3s 2d. Montgomery: First, 3s 3d. Newport (Mon.): First, 3s 9d; Second, 3s 6d. Norwich: First, 3s 2d; Second, 2s 10d. Oswestry: First, 3s 8d. Penzance: First, 3s 0d; Second, 2s 11d. Saffron Walden: First, 3s 8½d; Second, 2s 8½d. St. Ives (Hunts): First, 3s 2½d; Second, 3s 0½d. Salisbury: First, 3s 6½d; Second, 3s 4d. Skipton: First, 3s 1d. Truro: First, 3s 0d. Welshpool, First, 3s 6d; Second, 3s 3d. *Carlisle: First, 4s 0d. *Derby: First, 3s 6d. *Ipswich: First, 3s 6d; Second, 2s 6d. *Shrewsbury: First, 3s 6d; Second, 3s 3d. *York: First, 3s 9d; Second, 3s 8d.

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 9d. Doncaster: First, †5s 0d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 5d; Second, 1s 3d. Newport (Mon.): First, 1s 6d; Second, 1s 2d. Truro: First, 1s 4d. Welshpool: First, 1s 5d, Second, 1s 3d. *Derby: First, †5s 0d; Second, †3s 6d. *Ipswich: First, 1s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 3d; Second, †4s 6d.

(Continued at Foot of Next Column).

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, November 18th, 1925.

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Contributions.—The Editor will always be pleased to consi contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existe of "Eggs" to their poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, T Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, T Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Stre London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first p of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation "Eggs," it is imperative that new advertisemen and alterations are received by FIRST POST O FRIDAY MORNING to ensure insertion in t following Wednesday's issue. It is hardly nece sary to add that the earlier in the week we recei copy the better it is for everyone concerned.

PROOFS.—We cannot guarantee to submit proofs unless co plete copy is to hand by FIRST POST ON THE MONDA PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSU

DUCKS.

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* At these markets the prices quoted are for sales by p ducers direct to consumers. At other markets prices are th paid to producers by retailers. † Per head.

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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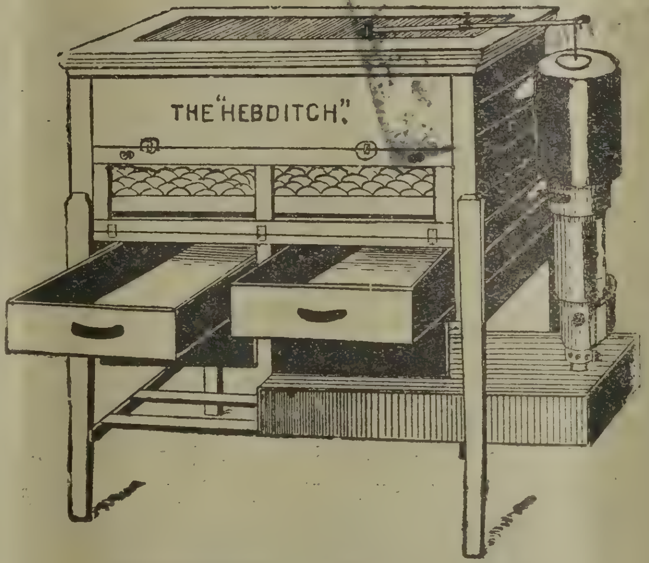
The LEADING INCUBATOR OF TO-DAY IS THE "HEBDITCH."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EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, NOVEMBER 25th, 1925.

Editorial.

WHY?

Last week's Editorial excited some comment, d one of our readers has very kindly suggested at it was only written to show how much we ow. That may be true, because if you are cretary of a big society, and have thousands questions to answer in the course of a year every conceivable subject, you very seldom ish the day without realising how much you N'T know, and therefore you feel a little xious sometimes to show how much you do know. wever, that was not the object in view when e article was written. It was only the desire find a reason for many of the precepts which ve been accepted for so many years, accepted thout investigation, and too often to the detri- nt of those engaged in the industry.

irst then: Why are we always advised to mate second-season male to pullets? We have seen s question answered in another journal thus:— ecause it is not wise to have immaturity on h sides." That is nonsense. It is most un- se to have immaturity on either side, and more ticularly on the female side. An expert has sted that he has bred healthy and vigorous ck from eight months old pullets. That may we have most of us done something in our s which has demonstrated that no rule holds d in every case, but the rule stands, and com- nsense tells us that an eight months pullet is ature, and practical experience tells us that breed from immature stock is to rush to ster. There must have been some idea in the d of the man who advised the mating of a nd-season male to pullets, that the maturity the one would compensate for the immaturity he other. That of course is ridiculous. There robably no better breeder than a well-matured et in HER PRIME, and the fittest mating for is a well-developed cockerel IN HIS PRIME.

he second question refers to the recommenda- to rest eggs, which have been sent by rail, twenty-four hours before incubating them. The usual explanation is:—"To allow the germ to settle." As is well known, the germinal disc is always to be found uppermost, whatever the position of the egg. This is because that portion of the yolk which is in the neighbourhood of the disc has a lighter specific gravity. It is not due in any way to the action of the chalazae. There is not the slightest reason why eggs should be held for twenty-four hours before being incubated because they have been on rail. It is only one of the parrot cries from which the poultry industry has suffered so badly, a statement which has been accepted because it has been so constantly repeated. It has been demonstrated by practical test that nothing is to be gained by resting travelled eggs twenty-four hours before incubating; indeed, a great deal may be lost.

The third question had reference to the advice given to air eggs which are being stored for incubation. The germ at this stage requires a minimum amount of oxygen. When eggs are aired it follows there is evaporation, which results in the membrane drying and becoming less permeable to gases. Thus the intake of oxygen and the expulsion of carbon dioxide becomes more difficult, and we are defeating the object we are endeavouring to attain. The moral is, "Don't air eggs."

The fourth question referred to the belief that barley and maize cause liver disease. This belief still exists. Its origin is easily explained. In the old days, when the average production of a hen was 80 eggs per annum, the method of feeding generally used was a hot mash of barley meal and potatoes, and whole maize, which was cheaper than wheat, as the grain food. A non-producing hen is easily fattened. As winter eggs were scarce, the idea was that a good hot mash stimulated the birds—there were no scratching sheds. We can easily understand that the birds were soon in an overfat condition and the liver became affected. This was attributed to the fat content of maize and barley, and not to the fact that the birds were actually being fed on a fattening mash. And so the poultry industry was for years deprived of two valuable foods. It was only when the absurdity of the belief was pointed out in these columns that the value of maize as an egg producer was recognised. The only time at which it is unwise to feed maize and barley is when the birds are out of production, and also to growing stock. This remark particularly applies to hens which are just through the moult and have not started laying ; if a little care is not exercised then, they will put on internal fat. There is not a single food which will not cause liver disease if fed in excess. Liver disease appears to be a very comprehensive term.

WHY do ALL Commercial EGG Farmers run the White Leghorn? This is a question which we leave to our readers to discuss. Or it might be put in another form : " Is the White Leghorn the most economical fowl for commercial egg production?" We suggest that this has been by no means proved, and that the chief reason why it is the popular breed for the purpose is because it was a case of follow my leader. Would a dual-purpose breed, such as the Buff Rock, or Rhode Island Red, be more economical? There are two considerations in their favour, the winter egg and the possibility of selling the cockerels at a profit. There are arguments which can be easily used in favour of the White Leghorn, but the possibilities of the other two breeds should be discussed, and if possible tested. We have breeders who have stated definitely that, as a commercial proposition, the Rhode Island Red is superior to any light breed, and we believe the same could be said of the Buff Rock, and possibly others. The points to be urged against them are, a greater consumption of food, slower maturity, and broodiness. In their favour is the winter egg, the brown egg, profit from cockerels as against a loss; the broody hen if properly handled will give more eggs in the autumn when they are scarce, the hen will realise more when her laying career is finished.

MEMBERSHIP OF THE S.P.B.A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, of farmers on a large scale to render themselves eligible for membership of the S.P.B.A. This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year began on 1st September.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, answer all queries relating to Ducks. In cases of extre urgency answer would be direct, otherwise they will app in these columns.

POST-MORTEMS.

" BODIES " for post-mortem examination should be sent Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarr Road, West Worthing.

Bodies should be packed and sent by post immediately death, marked for immediate delivery. The fee is 5s. fo reply by post. The name and address of the sender sho be distinctly marked on the package. Advice of dispatch fee should be sent under separate cover to Major Saunde

Readers are particularly desired to observe the above rules w sending birds for post-mortem examination and also a writing their name and address distinctly on the package

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to members of the S.P.B.A. on payment of a fee of 2s. 6d. letter. These are answered by the Editor, and relate every phase of poultry-keeping except post-mortem exam tions. Members of the S.P.B.A. are entitled to a reply by by the Editor by virtue of their membership (NOT Major Saunders).

ALL questions should be addressed to the Editor. Major Saun does not reply to questions either by post or through columns, except in relation to Post-Mortem Examinations

New Reader (Berwick). If you read the latter of Modern Poultry Feeding this week, you will what is the matter with your feeding. Replace meat meal with meat and bone meal, or fish m and add one part alfalfa or clover meal, and should get much better results. (2) I don't like photo of the cockerel you have sent me, and much doubt the breeder's statement that he was from a 274-egg hen. If he was he is a throw-b or his dam was badly mated. Under no circ stances would I breed from such a bird. He w certainly not produce layers. On reading your l again, I see you say that you have every confid in the breeder, and are convinced that the record true one. Well, if that is the case, it is not for m say. I can only repeat that you will be makin grave mistake if you breed from this bird. He is a dud, in spite of the dam's record, and the best you can do is to pot him.

Disappointed (Tyldesley). It is curious that letter should follow on that of "New Reade which is answered above. You bought, at a figure, a Wyandotte cockerel from a high record and mated him to your own hens which had re of from 180 to 203, with the most disappoi results. The pullets are laying small eggs, and few of them, and do not approach the records of dams, and now you ask me the reason, and ask trap-nest is infallible. I think what you fail to u tand is that a bird does not inherit everything from ts immediate parent. The trap-nest merely records he number of eggs laid by the individual. It by no neans follows that the son of every high record hen vill prove a breeder of high fecund stock. It depends ntirely on how much he has inherited from his dam, nd how much from his sire's dam, or his ancestors. No breeder could guarantee every bird he sends out o breed good stock, even if he knew the pedigree for wo or three generations, but he could, say, judging rom external characteristics, that a bird is not likely o prove a breeder of highly fecund stock. Your pul- ets would appear to have inherited the poor qualities f the sire rather than the good ones of the dam. There nay be a few worth selecting for breeders, but your visest plan will be to get another male and mate to he hens again. I would do this, and hatch a number f January chicks. These will lay in June. Note he rate of production for the first six weeks from the rst egg. and breed from the best in 1927. That is he only advice I can give you. (2) The sample of neat and bone meal is a nice clean one; the clover neal is inferior, and not worth the money; thirds and ran are good; grounds oats (not Sussex) good, and ould be used instead. (3) I would not care to start ncubation in a shed where the temperature often alls below 40 degrees Fahr.

Interested (Reigate). Well, now, you remind me f the man who went into the sixpenny shop and asked or the boot department. Fancy asking if the five hilling subscription to the S.P.B.A. includes the eekly copy of "Eggs." Just sit down and think uietly, and ask yourself how it could be done. No, e can offer you a good deal for five shillings, but not at. (2) Yes, your feeding is quite correct, but a ttle expensive. Biscuit meal at 30s. per cwt. is neconomic, and you would do well to replace it with ussex ground oats, which would give equally good sults. No, I can't recommend any proprietary mash 23s. a cwt. None of them are worth the money the poultry-keeper. He can't afford to produce eggs the cost. (3) Hatch Buff Rocks early in March; is a good choice. Yes, I agree you have done very ell, and have "every reason to be satisfied with your- lf," which, I believe, is supreme happiness

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L. M. (Nottingham). Well, if I agreed with you, u might be angry, but I do think you are an timist to expect to get such birds for 5s. 6d. each. they really had any value as breeders you may be re that the advertiser would have kept them, or ked a better price. These are hens hatched 1923, d not 1924 pullets, and they are the surplus of the mmercial egg farms, or have been bought up in ndreds. Sold as they are they realise 3s. more than they were sold as old hens, and it pays handsomely. ey are hardly likely to lay before the end of nuary, and you would be disappointed if you bred m them; better stew them. Treat the scaly leg th a three per cent. solution of Izal; it is not here- ary. (2) Yes, you can have 5 cwt. of any one mash or meal through the S.P.B.A. You will see the prices quoted in another column, but you must become a member. You would save your subscription and a bit more on your first order.

"Bothered" (Bideford). The sample of fish meal you send is of good average quality. There is not an excess of oil, and the symptoms you describe are not those which occur if birds are suffering from salt poisoning. It is a pity you did not send me a little more information. It is probable that the butcher's offal was the real cause of the trouble, and the birds are suffering from ptomaine poisoning. As they are improving I would do nothing except feed them well. A dose of Epsom salts would have been beneficial if administered at once; an iron tonic would help now more than anything else. (2) Smutty wheat is quite unfit to feed to poultry. (3) I don't think you are studying economy; you are merely trying to feed on cheap foodstuffs, and if you don't mind my being frank, you haven't an elementary idea of what is meant by economy. There is always danger in feeding damaged grain. You must try to realise that quality is essential; your cheap middlings and cheap bran are not fit for poultry food.

(A. M. C.). In such an exposed position you would be far wiser to keep the pullets intensively during the winter months. There is nothing to be gained by letting them out on the rough land. No, you are not overcrowding with 130 birds in the converted shed, and there seems no good reason why it should not answer well if you put the window on the south side as you suggest. (2) I should certainly dub the cockerels; you will get better fertilisation if you do, and there is no cruelty in the operation. The "complete" mash given in the article, "Modern Poultry Feeding," would be well suited to your pullets which you are keeping intensively. The best grain would be: Three parts kibbled maize and one wheat. If you use limestone grit oyster shell will be unnecessary.

G. R. (Herts.). It is very unusual to receive a complaint as to small eggs from Black Leghorns, and as they are so late in coming into lay, and are laying so poorly, I am inclined to think that there is something wrong with the management. Either they have been badly reared or are underfed. Will you write me again, and send fuller particulars and samples of the food. I can see no reason to advise you to change the breed which are well suited to your conditions (2) If you will read the supplement to the Dairy Show issue of "Eggs" all your questions *re* incubation will be answered. I have not space to answer them here to-day.

D. M. (Mowbray). No, you are mistaken. I have never claimed better results from dry mash feeding than wet. I say equal results may be obtained by either system, and I am not inclined to "shout" because the dry mash birds did better in the Glamorgan Laying Trials. The best way to overcome the the water difficulty would be to put a Little Putnam stove under the water vessel. Yes, I think your birds are doing well, and it is a tribute to your management to get such excellent results. As you say, it shows what can be done without spice. I cannot say yet what proportion of your birds will be fit for the breeding pen, but taking the October records as a standard, there should be five with records of 240 or more, and 18 which will pass the 200 mark, if nothing untoward happens. That does not say that everyone will be fit to breed from. The October record is a very fair indication of what a pullet will lay in her year—not infallible, of course, but, as I said, an indication.

C. T. R. (Leominster). I am sorry but I can't remember your sending me some unhatched eggs in the spring. You see something over 2,000 arrived, and its hard to remember one particular lot, even when you remind me that you only hatched 52 per cent. You say I told you at the time that I was convinced that the eggs were at fault, and now you ask what I meant by that. What a pity you did not ask me at the time. In all probability I meant that the stock birds were at fault, but there is a chance that I believed the eggs had been badly stored. Presumably I found a large number of the embryos had died at a very early stage of incubation. This might have been due to three causes: Weak fertilisation; bad storage; too low a temperature in the incubator. The machine you mention is a good one, but it would be wise to have the thermometer tested. (2) At present I should not say the Red Sussex as a breed were such good layers as the Lights, but there is no reason why, with careful breeding, they should not be.

F. R. (Bootle). I agree, however good a bird may be in other respects, no award should be made if it had a crooked breast-bone. The judge may say it was an acquired character, due to faulty perching, but he cannot be certain of that. Even if it is so, the breeder should be penalised for a fault he could have avoided, and if it is not so, it is worse still, as to breed from such a bird would be a grave mistake. (2) A ricketty condition may be induced by other things besides bad feeding. Bad brooding conditions would result in incomplete assimilation of food. It may be inherent, due to the dam herself failing to assimilate sufficient lime, so that the egg from which the chicks are hatched may be deficient in that respect. (3) No, you can't improve the size of egg by only incubating large eggs, unless these are the normal size laid by a hen. If she has laid small eggs, and then lays one weighing, say, 2½ozs., the chick hatched from that egg would not lay larger eggs than its dam, unless the dam was mated to a sire from a large egg dam. In that case the chick might inherit egg size from her sire's dam, but it would not possess an equal chance of doing so. Your letter does not bore me in the least, so there is no need to apologise; on the contrary, I find it very interesting.

F. L. M. (Winchester). The samples are of good average quality, and your feeding is correct. Your mistake was hatching Wyandottes so late as the end of May. It is hardly likely you will get eggs before January, and they will be small. Really your best plan would be to fatten all these birds, and sell them as table birds; as layers they are likely to prove most unprofitable. In future don't hatch Wyandottes after the first week in April.

B. S. (Castle Dawson) sends two samples of sharps and asks which is the better value—one at 9s. 6d. cwt., and the other at 11s. 6d. That at 11s. 6d. is almost equal to seconds flour, and is worth the money; but that at 9s. 6d. is of good average quality, and under the circumstances I would advise "B.S." to use this. As he wishes to know what quantity of potatoes he could use in a mash for laying hens, and what meals it would be necessary to use with them, I would advise him to try the following mash:—One broad bran, one alfalfa meal, four middlings, three potatoes one fish meal or meat and bone meal. He must remember that the potatoes are very deficient in lim salts, and, therefore, it is necessary that he shoul use meat and bone meal or fish meal; and th alfalfa meal would be a great asset. In answer t his further question, R. I. Red cocks would not mak a good cross with White Leghorn hens. The cros should be the other way.

H. S. M. (Weare) writes to say that he could purchase on reasonable terms, a meal made up of 6 per cent. barley meal, 25 per cent. sharps, and 1 fish meal, and wishes to know whether this woul make a suitable laying mash. In answer to his question, no, it would not make a suitable laying mash It is far too fattening. The percentage of barley mea is too high. He might get better results if it wa made of:—60 per cent. sharps, 25 per cent. barle meal, and 15 fish meal, although that would be b no means a model laying mash.

A. H. (Newberk) wishes to know if barley is goo for fowls He has an offer of fine barley at 8s. 6d against wheat at 11s. 6d. He dry feeds, and gives good two ounces of oats, kibbled maize, and wheat pe day—morning and evening. Would he be safe i substituting barley for wheat? Yes, quite safe. Ther is too much prejudice against the use of barley. would suggest that if he used equal parts barley an kibbled maize he would get better results than if b included oats in the grain mixture.

A. C. (Burnley). I am publishing shortly an illustration of a hopper which will not clog, and one which know from practical experience will not waste. model has already appeared on the S.P.B.A. stan at the Dairy and Palace Shows. Particulars of th S.P.B.A. are being sent you by post.

Modern Poultry Feeding.

By TOM NEWMAN.

BROODINESS AND FEEDING.

A correspondent, who is anxious to hatch and rear with hens during the coming breeding season, asks me to send him a formula which will "make hens broody." I may as well say at once that I cannot help him ; there is nothing to be done in this way. One sees "Broody Pills" and also "Anti-broody Pills" advertised, and frequently I have been asked as to whether they are efficacious. They are no good at all. Like my correspondent's question, they are made on the assumption that broodiness is caused by a rise of body temperature, and many people are of opinion that a broody hen is feverish. This is a mistake, there is no rise in temperature, and the idea that by giving what are called "heating" foods, such as maize and barley, we can induce broodiness is altogether wrong. You could not increase a hen's temperature by feeding it on maize and barley—that is, a healthy, normal, well-fed hen. What arouses the broody instinct, and why it is o much more strongly developed in some birds han others we do not know. It has nothing whatever to do with the feeding. The best advice I can give him is to leave some eggs in the nest. If this is done it does appear to arouse the broody nstinct. It is no good leaving one or two, ten or welve at least. It is not infallible, but it has nswered.

The high price of fish meal has created a demand or meat meal or meat and bone meal, with the usual result ; the market is flooded with inferior amples. In some of these I have found a considerable quantity of hair and hide, and in the meat and bone an excessive amount of bone. In hree cases there has been bad digestive trouble, but no mortality, and a heavy drop in the egg ield which one would naturally expect. One annot say definitely that it was due to the meat meal. It may have been a coincidence in each ase, but there was strong reason for suspecting the meat meal was at fault. There are some amples which have a distinctly rancid smell, and these should be rejected. Smell, the presence of air and hide, and excessive amount of bone are indications that a sample is not fit for poultry feeding.

If any member of the S.P.B.A. would like to see really good sample of Sussex ground oats, I will e pleased to send him one on receipt of a stamped ddressed envelope. There is so much sold that not the genuine article that a very large number f readers, particularly in the North, do not know what it is. Neither do their corn merchants or millers appear to know. I have had samples sent me this week, at 17/6 and 18/6 per cwt. respectively. In the former it was obvious that ground oat shudes had been added, while the latter was coarsely ground, and undoubtedly contained ground tapioca root. What is surprising is the high price which is often demanded for an inferior sample, and on more than one occasion it has been described as "beautifully white." Now a pure sample of Sussex ground oats is not "beautifully white," and when it is described as such, it is pretty safe to say that it is adulterated. A good sample should bind when gripped in the hand, just as flour will do ; it should be smooth to the touch, much as flour is. The husk is hardly perceptible to the naked eye. If it is rough to the touch, and the husk is easily seen, then you may be sure it is not a Sussex ground oat, or that ground oat shudes have been added, and that you are not getting value for money.

It seems very necessary to impress upon readers, particularly those who keep fowls in confined runs, or commercial egg farmers whose birds are kept almost intensively, and short of green food during the winter months, the necessity of supplying the calcium salts in some form if we are to get satisfactory egg production. Those who supply swedes and mangolds as a substitute for green food should remember that they are very deficient in the lime salts; and for that reason can never be a complete substitute for green food. Now let us compare two mashes, the one we will call deficeint and the other complete as far as our knowledge goes at present :—

DEFICIENT.	COMPLETE.
2 lbs. Bran,	1 lb. Alfalfa Meal,
4 lbs. Middlings,	1 lb. Bran,
2 lbs. Maize Meal,	4 lbs. Middlings,
1 lb. S.G.O.,	2 lbs. Maize Meal,
1 lb. Meat Meal or Blood Meal.	1 lb. Ground Oats,
Green Food: Swedes or Mangolds.	1 lb. Fish Meal, or Meat and Bone Meal, or Green Bone.
	Green Food: Swedes or Mangolds.

On the first the production of eggs would be small, although in the spring and summer with birds on free range it would give good results. The second would give good results at all times of the year, and is a first-class formula, which can be used wet or dry. The swedes and mangolds are hardly necessary, and are only given to show that their deficiencies are supplied by the alfalfa meal and the various animal products. The first formula we can say is badly balanced, and would give most unsatisfactory results. The second, as far as our knowledge allows us to say at the present day, is well balanced, and will always give good results—it is a good laying mash. For breeders I would double the ground oats and halve the maize meal. We are certainly coming to the

(Continued at Foot of Column Next Page).

Correspondence.

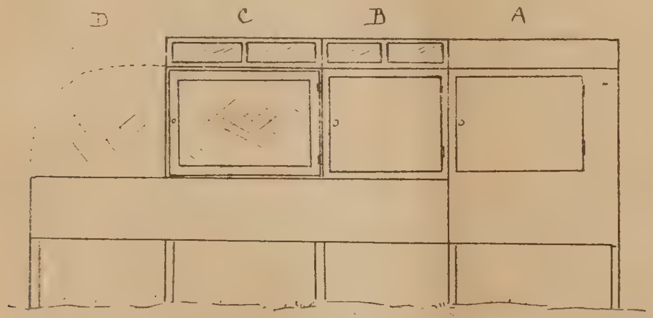
INTENSIVE REARING.

To the Editor of "Eggs."

Sir,—The forthcoming rearing season will be the third year of my experiments with outdoor intensive brooding, and I enclose a rough sketch giving the main lines on which my apparatus is constructed, in the hope that it may interest your readers or evoke comment which will be helpful. This form of rearing has advantages and is worth studying. I believe that in a properly constructed hover it will be possible to keep the chicks in the fresh air irrespective of the weather. Attention to their needs is a very simple matter. As soon as they know their way about they can be left entirely to their own devices. A visit to renew food and drink, and to attend to the lamp, is all that is essential, and the floor, being lightly sprinkled with dry earth, needs a little fresh soil after rain, or in the dry weather, only once in five or six days.

Greenstuff I have not found a necessity, though I prefer to provide it. Milk and fresh sods, grass side down, will provide vitamins sufficient for healthy growth up to 10-12 weeks. Milk alone I have found adequate, but it is expensive to rely upon as the sole source of salts and vitamins.

With regard to the brooder, I have given no measurements as my three rearers vary widely, being experimental, and anyone who wishes to build can use his own discretion.



A. is the hover house, rather larger than the hover to be used, and is ventilated under the eaves, the roof being provided with an outlet for fumes. Boarding and roofing may be used for this as for the rest of the work. I am trying one rearer made of sheet galvanised iron on 2 x 2 framing.

B. is a dining room, very freely ventilated, with a glass roof.

C. is entirely open to the air, the only protection being a glass roof.

D. is the open-air run, the roof being a lift-off frame covered with netting. An arch of netting over this is shown in the sketch. If only half the run is covered over and the whole is arched over, the chicks can hop up on to the half cover and sun themselves, which they enjoy doing.

I should add that C. and B. may be about 6 ft. by 3 ft. each. As to D., I have found 16 ft. by 3 ft. enough for 60 chicks up to eight weeks, but this season am using about 25 ft. by 30 ft. run, and hope to keep the birds in until 10-12 weeks.

If any of your readers care for further particulars than can be put into this short account I shall be glad to furnish them.

In conclusion, let me say that I have found chicks reared under intensive conditions to be in every way as good as those brought up in the usual way on turf. Indeed, I consider that they are of no small advantage in the matter of vitamins, for any fixed run must necessarily very soon lose all its tender grass, and certainly all insect life, whereas my chicks get a fresh supply of both daily.

I am Sir, yours faithfully,
P. LARCOM.

THE POULTRY MAN AND HIS CHICKEN-REARING APPLIANCES.

To the Editor of "Eggs."

Dear Sir,—On October 28th two letters were published in "Eggs" in reference to my article on "The Poultry Man and His Chicken-Rearing Appliances"—that by Mr. Cundy, a trained engineer, was appreciative and valuable. His enquiries for information have been satisfied; one may hope that he will not be "for it" in the future so frequently as in the past.

MODERN POULTRY FEEDING.—Continued.

time when our views as to the value of animal protein will have to be modified, and we shall not calculate the value of a meat meal in £ s. d. by the percentage of albuminoids. We want to test this on the S.P.B.A. experimental farm. We have said a great deal about the superiority of animal over vegetable protein. It is question which is certainly in need of further investigation. Alfalfa meal has now come to a price which can be regarded as economic, so that its use during the winter months is strongly recommended. Where there is plenty of green food in the shape of anything of the cabbage tribe, it is of course unnecessary. Good samples of maize germ meal are now cheaper than maize meal, and are recommended. Care, however, should be taken, as in some cases where the wet method of extraction is used they are sometimes packed in a moist condition, and they then cause serious digestive trouble. If a sample smells at all sour, it is not safe to use it. From a feeding point of view, it has a better value than maize meal—that is, if the sample is a really good one.

The hope that he expressed that the blue-flame tmosphere burner was an element in the solution of earing is well founded—it is, and surely his vigorous ondemnation of the flat-wick junk now on the market hould lead to its early disappearance.

The other letter was from Mr. A. Powell, who tells s that he was the designer of the "first hover of this ype," and thus affords an opportunity of saluting ne who, should there ever be a Chick Court of ustice, may expect, alas! to receive a rough handling y our feathered friends for the unintended suffering flicted on them by the conical metal hover.

Unfortunately justice cannot be done to his criticism ecause I do not know what he means by "this type," nd the fair attention I should like to give to his emarks must be held over until he favours us with ore details, or, forsooth, a drawing of the hover ("of his type"). I have written him for these particulars, ut without result, but may be, Mr. Editor, he will indly furnish it to you.

In case, however, this hope should not mature, ay I reaffirm my statement that anyone who supposes a conical hover can by any possibility be free rom draught, has yet to learn the fundamentals of that wful instrument. As to the "curtain resting lightly pon their (the chicks') backs." I have seen it when he heat under the cone has driven them to the otherly caresses of that famous fabric: also I have een them at 4 a.m., when it no longer afforded that egree of comfort, and oh, what a tale it told!

Yours truly,

C. HESKETH.

VENTILATION.

To the Editor of "Eggs."

Dear Sir,—In your issue of 4th inst., your contributor, Mr. P. S. Campbell, has certainly made ery significant suggestions, and **if** they are orrect, the whole poultry stock of the country ust indeed be in a very bad way, for they always ave been, and still are, the victims of bad ventiation. It is shocking to think that no house has et been made—or if it has been made it was ot exhibited at the Dairy Show—which provided roper ventilation, i.e., all **save one.**

But how does Mr. Campbell account for the erfect health which can be indisputably claimed or their stock (amounting in the aggregate to robably hundreds of thousands) by the large oultry breeders and poultry farmers, and the ens of thousands of the smaller poultry-keepers hroughout the country?

The laying records of the present day have, I resume, not only never been surpassed, but until ate years have not to any extent ever been qualled, and this from layers kept in present-day ouses.

What these records will become when the layers are housed in "suitable" houses is enough to make one green with envy towards those happy poultry-keepers who are able to scrap their present houses and adopt this most "modern" type—a type which, by the way, some of us scrapped years ago. (Now, if the clerk of the weather would always keep the wind in the same quarter, how easy ventilation would be, even in a house of the design advocated.)

This design may be adopted by the **few,** who do not object to the unsightliness of the roof coming right down to the ground, and who perhaps may not have given due consideration to the fact that the windows are on the roof, and that occasions arise very often when skylights, do what you will (less than very expensive plumbing), will let in the water.

It is possible that even experts may not have kept their eyes sufficiently open to know that ridge ventilators have been provided in their houses by some of the poultry appliance makers for the past twenty years or more, and for a similar period, other successful ventilating devices have been provided in all their best class of house by the leading and old-established makers—men whom your contributor would hardly class as being ignorant of the principles of ventilation, principles which have kept the stock of the whole country in good health.

These men may not be theorists, although theory **is** much easier than practice, but their practical methods have been the means of enabling them to supply a want in poultry houses at a popular price.

With reference to the hovers. Your contributor, of course, spoke of those which he saw, but I use one (which, I take it, he did not see at the Dairy Show), in which the designer has provided for an incurrent of fresh air amongst the chicks.

This hover is used very extensively, and it is sometimes advertised in "Eggs."

I am, yours faithfully,

"CRITICUS."

ANSWERS TO QUERIES—Continued.

E. P. (Bury). I would advise you to turn to the article on "Modern Poultry Feeding," and give your birds the mash which is recommended there as a "complete" mash. Yes, 18s. cwt. does seem rather dear. Give the mash in the morning, and the feed of grain at night, about two ounces per bird. It depends on whether the hens, which are running out, are able to find any grit. If not, it is advisable to give them oyster shell or limestone grit. Flint grit is useless to poultry. Your birds should do well on your half-acre of orchard, if fed as advised, and provided they are in a condition to lay.

Bees.

By E. W. D. MADOC.

THE PREPARATION OF HONEY FOR MARKET.—(I.)

In the case of comb honey the sections should first be scraped clean of propolis, great care being taken to avoid damaging the comb, because this not only spoils the appearance of the section, but honey will drip from the mutilated cells and make a sticky mess of the section and of anything with which it comes in contact.

Grading is the next operation, placing the sections in three groups according to their quality. No. 1 should be well filled and capped, and the cappings of a fairly light colour; No. 2 must be fairly well filled and capped, and contains all the marketable sections not good enough for the first group; No. 3 are those sections not good enough for marketing, either because they are not sufficiently full or partly uncapped, or that have been badly built or damaged in handling. This last group should be used for home consumption, or extracted and used next year as "bait" sections to attract the bees into the first crate of sections, for which purpose they are very valuable.

On account of their fragile nature, the packing of sections for despatch by rail requires to be carefully and properly done. They are first made into parcels of six wrapped in newspaper, or preferably greaseproof paper, and these units are then packed in a strong wooden box with a good thick layer of straw on top, bottom and sides; the bottom layer should be thickest, six inches is none too much. The larger the number of sections in one box, the less likely are they to be broken, because the great weight makes them less easy to throw about. A slat on each side extending to form handles makes them more easy to handle carefully, and is always worth the extra trouble. Lastly, the nature of the contents of the box should be clearly printed on the labels in large easily read letters. Where large numbers of sections are produced and sent away by rail a special box made of corrugated paper, holding two dozen sections, with a separate compartment for each section, is frequently used, and takes the place of the small parcels of six already mentioned. Small numbers of sections are sometimes sent by post, but they generally meet with rough handling, and only those sections well attached to the sides of the section should be sent in this way, and each section must be wrapped in a piece of greaseproof paper to prevent one damaged section making a sticky mess of all the rest, and also to avoid damage to other parcels with which it may come in contact.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

INCUBATION.

Since the appearance of the supplement to the Dairy Show issue of "Eggs," which dealt with this subject, I have received letters from readers who say they have good results when they have cooled their eggs, and would I advise them not to cool in future? Well, now let us see. They have good results when they cooled their eggs, and they may believe they got good results BECAUSE they cooled their eggs. What would be my position if they had a bad hatch when they didn't cool They would immediately say it was because they didn't cool. I have given a reason why eggs should not be cooled, and no one has ever given a reason why they should be. Further, I am able to back my reason with practical tests over one season, and to give the result of an official test on a large scale. When you write asking me if after obtaining good results when cooling, you should follow my advice, and not do so, well, I would prefer to leave it to you.

FIT TO WIN!!!

"Exhibition Rich Red Cockerel, six months, win anywhere. 21s. —Approval."

The above advertisement from a contemporary has been sent me. The writer explains that he bought the bird in question, and sent a note to the vendor telling him he was pleased with his purchase. He was then sent to a show, in the Backyarders' Section, while my correspondent waited at home for his return with the first prize card. The bird arrived cardless. Next he was sent to another show. In his own class there were only four exhibits. The bird again returned cardless, and the judge told him it had no chance, as it was a Buff Rhode Island, and would have no chance in the utility classes, because it had only two-finger capacity (when will judges understand that a close-boned bird will breed as good stock as one with "capacity"?). Now my friend thinks he has been done. In the course of a year we get many such complaints as this, and I hope he will not feel hurt at my referring to it here for the benefit of other novices. If that bird *could* have won *anywhere*, a guinea would hardly have been an exorbitant price for him. People don't sell birds "fit to win anywhere" for 21s. Just as they can't afford to sell 1924 White Leghorn pullets which "will lay well through the winter, and make ideal breeding pens" for 3s. 6d. each. It is curious that all this cheap stock is advertised in the most fulsome manner, and that so many people are taken in by it. Is it likely that anyone is going to sell birds which lay well all the winter for

s. 6d. each, and eggs at 3s. 6d. a dozen? Will they ell for a guinea a bird which will "win anywhere?" 'here are hundreds and perhaps thousands of old White eghorn hens advertised as 1924 pullets at prices arying from 3s. 6d. to 5s. 6d. with a reduction on six, nd carriage paid. It is a profitable way of getting d of old and worn-out stock, which would otherwise ave to be sold for the only purpose for which it is tted.

THE WELLINGHAM EXPERIMENTS.

I have received the following report from Miss Ialcolm on the S.P.B.A. Intensive Experiment:—

> "The birds in this experiment are now nine months old. Those which matured early and went into a pullet moult are either through or nearly through their moult, but some of the later maturing birds are now in moult. The birds laid during the month of October 1,877 eggs. One bird died in October; a post-mortem was made, and the cause was found to be a broken yolk; the bird was in excellent condition. All the other birds are very well and active; there are no colds, in fact, the birds could not be better."

The report must be regarded as very satisfactory. he pullets, some of which started to lay in June, veraged 14½ eggs per bird during October. When one nsiders that many of them were in a partial moult, is must be considered good going. Miss Malcolh lls us that many of the early moulters are through, d will soon be contributing to the egg basket again. is some years since I suggested that the early-atched Leghorn was a more profitable proposition an was generally believed, and further experience nfirms this opinion. These 130 birds hatched in ebruary have been profitable producers since July. e average per bird during August was 17½ eggs. lds during September, and the partial moult in tober, which was no doubt in some measure respon-ble for the partial moult, explain the decreased yield uring these two months, but in spite of that the ofit over the cost of labour and feeding for the two ost trying months of the year has been very satis-ctory. I feel some regret that it will be necessary remove 60 of these pullets to our Experimental rm here at the end of the month.

SOUTH AFRICAN LAYING TEST.

I have received the following letter from the Secre-ry of the South African Poultry Association (Mr. N. Wheeldon):—

"Dear Sir,—I wish to bring to your notice the fact that my ociation has been instrumental in getting the Government to ugurate an up-to-date Egg Laying Test open to competitors where in the world, at the School of Agriculture, Glen, nge Free State.

he pens are now being constructed, and it is estimated that less 500 will be ready for use about the 1st May next. h building will house about 100 layers, and each bird will provided with a separate pen, so that the most accurate rds may be had.

ach entry shall consist of five pure-bred birds, and it is ed that more entries will be received from overseas' breeders n is the case of the only other local test open to breeders side South Africa. There is a good market here for tip-top layers, and English competitors sending teams across and doing well will have no difficulty in disposing of their birds should they desire to do so.

The Rules and Regulations have not yet been framed.

Yours faithfully,

H. N. WHEELDON,
P.O. Box 6463, Johannesburg

PRICES OF MASHES, ETC.

The following meals can be supplied in 5 cwt. lots and upwards of one kind free on rail:—

Fish Meal (Pure White)	**19/3**	**F.O.R.**	**London.**
,, ,, ,, ,,	**19/0**	**F.O.R.**	**Swansea.**
,, ,, ,, ,,	**19/3**	**F.O.R.**	**Tynemouth.**
,, ,, ,, ,,	**19/9**	**F.O.R.**	**Grimsby.**

Fish Meal with 2 per cent. oil content not at present available.

PRICES OF MASHES. Per Cwt.

	Layers.	Growers.	Breeders.
F.O.R. LIVERPOOL	**11/3**	**11/3**	**11/9**
F.O.R. LIVERPOOL	**12/3**	**12/3**	**13/9**
F.O.R. LONDON	**11/6**	**11/6**	**12/0**
F.O.R. LEITH	**10/9**	**10/6**	**11/8**
F.O.R. LEICESTER	**11/0**	**11/0**	**11/9**
F.O.R. GREENOCK	**12/0**	**12/0**	**13/3**
F.O.R. KING'S LYNN ...	**11/6**	**11/6**	**11/9**
F.O.R. BELFAST	**12/9**	**12/3**	
F.O.R. BRISTOL	**11/3**	**11/3**	**12/3**
F.O.R. SOUTHAMPTON ...	**11/6**	**12/0**	**12/0**
F.O.R. PLYMOUTH	**12/6**	**12/9**	**12/6**
F.O.R. ABERDEEN	**12/3**	**11/9**	**13/9**
F.O.R. HARROGATE ...	**12/6**	**12/6**	**13/6**
F.O.R. GLASGOW	**12/9**	**12/9**	
F.O.R. STAFFS.	**11/6**	**11/6**	**12/6**

Sussex Ground Oats F.O.R. London: 12/6 per cwt.
,, ,, ,, F.O.R. Sussex: 12/9 per cwt.
,, ,, ,, F.O.R. Bristol: 13/0 per cwt.

APPLICANTS FOR MEMBERSHIP.

Carman, P. W., School House Farm, Horsmonden.
Court, H., "Woodfield," Millstrood, Whitstable, Kent.
Tait, W., Heatherinch Farm, Ladybank, Fife.
Salsbury, Miss D., Sayer's Croft, Ewhurst, Surrey.
Scott, Miss E. M., Fir Grove Manor, Eversley, Hants.
Goodricke, A. F., Felbridge, East Grinstead.
Cunliffe, J., 2, West View, Helmshore, near Manchester.
Logan, J., Druin-Dan Deur, Portadown, Ireland
Gore, The Hon. Mrs., Holton Place, Wheatley, Oxon.
Verry, H., Sunnyside, South Wootton, near Kings' Lynn.
Taylor, G., "Rose Cottage," Aldford, near Chester.
French, W. H., Gladstone Street, Kibworth, near Leicester.
McDonald, J. V., Oldhamstocks, Cockburnspath, N.B.
Garne, Mrs. T., Ladbarrow, Aldsworth, Cheltenham.
Oatley, E., Manor Farm, West Ashton, Trowbridge, Wilts.
Gwynn, Lieut.-Colonel R. S. D'Arcy, Bella Luce, Guernsey.
Wood, E. M., Burnt Oak, Waldron, Sussex.
Boswell, F. A., at 27, Southtown, Great Yarmouth.
Turner, G. E., Duton Hill, Dunmow, Essex.
Bott, Comm. L. C., Oaklands, Wellpond Green, Standon, Herts.
Roberts, F. H., Oaktree Cottage, Barnston, Cheshire.
Copeland, E., Chester Road, Neston, Cheshire.
Home, H., The Bungalow, Raby Park, Neston, Cheshire.
Walker, A. S., Holly Bank, Agden, near Altrincham, Cheshire.
Bisgrove, W., 5, Morley Terrace, Radstock.
Freeman, R., Colne, near St. Ives, Hunts.
Greenoff, F., 20, Wickworth Street, Nelson, Lancs.
Perryman, A. C., The White Horse, High Roding, near Dunmow, Essex.
Dent, T., 53, Lawn Road, Fishponds, Bristol.
Mann, Miss M. R., Holly Tree Cottage, Lower Peover, Knutsford, Cheshire.
Dunsmore, J., South Albion Cottage, Avonbridge, Scotland.
Firth, Miss B. M., Hedgerow, Somerford, Christchurch, Hants.
Sizeland, R., School House, Long Itchington, Rugby, Warwickshire.
Burch, A., 14, Simon Place, Jersey, C.I.
Westerman, E. M., The Nurseries, Saltfleetby, Louth, Lincs.
Hare, V., Yeomans Road, Strouden, near Christchurch.
Hewett, W. R., Yeomans Road, Strouden, near Christchurch
Havill, E., Frewins, Budleigh, Salterton.
Pennington, Miss C., 712, Carrington Terrace, Leigh Road, Leigh, Lancashire.
Young, J. M., 5, Brick Buildings, Lennoxtown, Scotland.
Pope, N. J., The Bungalow, Baldu, Chacewater.
Warren, F. J., The Nest P.F., 17, Woodmansterne Road, Wallington, Surrey

Fricker, O, Downside Abbey P.F., Stratton-on-the-Fosse, near Bath.
Forshaw, W. O., "Woodhouse," Peaslake, near Guildford.
Renouf, H., P O Stores, West Chiltington, Sussex.
Scrase, J. W. E., Barndown P.F., Stonegate, Ticehurst, Sussex.
Nicholas, Major C P., 23, Havre des, Pas, Jersey, C.I.
Staniforth, Miss I. M., Hinderwell, Yorks.
Daft, H. H., Manor Farm, Thornton-le-fen, New York, Lincs.
Morrison, W. B., Invergowrie, by Dundee, Scotland.
Black, J., Horsecross Mills, Perth.
Jackson, P., Meadow View, Mickle Trafford, near Chester.
Murphy, Mrs. L K., Knockreigh, Adamstown, Co. Wexford.
Grish, L., Cherry Orchard P.F., Woodchester, Glos.
Harland, F., 60, Emily Street, Keighley.
Green and Rhodes. Denley Mount, Oakworth, near Keighley.
Crowther, H., 39, Belgrave Street, Nelson, Lancs.
King, Mrs. E., Bedford House, Turfpits Lane, Erdington, Birmingham.

KEIGHLEY AND DISTRICT BRANCH OF THE S.P.B.A.

The second Annual Open Utility Poultry Show was held by the Keighley and District Branch of S.P.B.A. in the Drill Hall, Keighley, on November 14th, 1925. Record entries were received from all parts of England and Wales, and the quality of exhibits were voted as excellent. The judges were Messrs. Wm. Hamnett, Blackpool, and P. Wainwright, Castleford. Number in brackets signifies number of entries in class. Awards were as follows:—

Class 1 (5).—A.V. Light Breed, Trio: 1, Mrs. Davidson, Summerbridge; 2, F. Preston, Trawden; 3, H. Whiteoak, Kildwick; Res., Rev. W. Parker, Wilton, Tow Law; V.H.C., A. Snowdon, Pool.

Class 2 (5).—A.V. Heavy Breed, Trio: 1 and Sp., H. Whiteoak; 2, F. J. Dimmock, Keighley; 3, Joe Hey, Keighley; V.H.C., G. Wilson, Denholme; H. C. Hugh Kershaw, Keighley.

Class 3 (16).—W. Wyandotte, Male: 1 and S.P.B.A. Cup, A. G. Pitchford, Todmordon; 2, I. Johnson, Harrogate; 3, N. Sharp, Liversedge; Res., H. Whiteoak; V.H.C., A. Adair, Huddersfield; H.C., N. Sharp.

Class 4 (17).—W. Wyandotte, Female: 1, H. Whiteoak; 2, A. G. Pitchford; 3, J. Blackburn, East Marton; Res., S Hartley, Haworth; V.H.C., Mrs. Clay, M.B.E., Long Preston, and N. Hiley, East Morton.

Class 5 (18).—R.I. Red, Male: 1, G. W. Clegg, Pudsey; 2, A. G. Pitchford; 3, W Lodge, Stamingley; Res., Mrs. E. Lilley, Silsden; V.H.C., B. Birkhead, Bexley Heath, and H. Holmes, Shelf.

Class 6 (17).—R.I. Red, Female: 1, H. Holmes; 2, W. Key, Boxted; 3, F. Harland, Keighley; Res., Mrs. Davidson; V.H.C., Percy Hall, Cleckheaton.

Class 7 (5).—Barnevelder, Male: 1, I. Johnson; 2, Mrs. Clay; 3, J. Wilson, Penrith; Res., Miss E. Eurich, Ilkley; V.H.C., Miss Eurich.

Class 8 (8).—Barnevelder, Female: 1, Miss Eurich; 2, Mrs. Clay; 3, H. Edge, Halesowen; Res., R. J. Burgess, Holmfirth; V.H.C., J. Wilson.

Class 9 (8).—L. Sussex, Male: 1, E. Whitaker, Mytholmroyd; 2, Mrs. Davidson; 3, H. Oldman, Howden; Res., Davey and Son, Sutton-in-Craven; V.H.C., W. Collett, Braithwaite.

Class 10 (8).—L. Sussex, Female: 1, E. Whitaker; 2, H. Holmes; 3, R. Fife, Louth; Res., Davey and Son; V.H.C., Mrs. Davidson.

Class 11 (11).—W. Leghorn, Male: 1 and Sp., 2 and 3, and Keighley Members' Points Cup, Harry Whiteoak; Res., F Waddington, E. Morton; V.H.C., F. Pollard, Colne.

Class 12 (13).—White Leghorn, Female: 1, A. Petty, Colne; 2, H. Holmes; 3, F. Preston; Res., H. Whiteoak; V.H.C., Mrs. Clay.

Class 13 (5).—Black Leghorn, Male: 1 and Sp. and 2, Wilson and Whitley, Nelson; 3, B. Birkhead; Res., Mrs. Clay; V.H.C., Mrs. Wilson, Denholme.

Class 14 (17).—Black Leghorn, Female: 1 and 3, E. Griffiths, Glasshoughton; 2 and V.H.C., J. H. Fairweather, New Earswick; Res., B. Birkhead.

Class 15 (10).—Exchequer Leghorn, Male: 1 and Sp., Thos. Wilson, Heversham; 2 and 3, F. Deboos, Laindon, Essex; V.H.C., J. J. Dinsdale, Settle; H.C., Frank, Dinsdale, Hawes.

Class 16 (17).—Exchequer, Leghorn Females: 1 and Sp, Thos. Wilson; 2, A. and L. Jones, Pembroke; 3, Joe Hey; V.H.C., Wright and Fortune, Keighley; H.C., J. Lewis, Wray.

Class 17 (3).—Ancona, Male: 1, Vince Moorhouse, Colne; 2, Mrs. A. Hanson, Barnsley.

Class 18 (6).—Ancona, Female: 1, Sp. and 2, V. Moorhous 3, E. Whitaker; V.H.C., Mrs. A. E. Hughes, Beverley.

Class 19 (12).—Buff Rock, Male: 1, R. Rhodes, Ben Rhyding; 2, F. Preston, Keighley; 3, Wright and Fortune; Re C. Smith, Keighley; V.H.C., G. Deighton, Haworth, and Skirrow, Hartshead.

Class 20 (8).—Buff Rock, Female: 1, B. Birkhead; 2 and and V.H.C., C. Smith; Res., E. Hodgson, Oakworth.

Class 21 (4).—A.O.V., Male: 1 and Sp., Miss Fowler, Fen cowles; 2, F. R. Simpson, Haworth; 3, A. G. Pitchford.

Class 22 (5).—A.O.V., Female: 1, Simpson and Poole, Otle 2, Mrs. Garnett, Skipton; 3, E. Whitaker; V.H.C., J. Brayshaw, Keighley.

Class 23 (5).—Novice: 1 and Sp., S. Hartley; 2, F. Newi Keighley; 3, J. Blackburn; Res., G. Carr, Nelson.

Class 24 (9).—Crossbred Pullet (s.c.): 1 and Sp., W. Baile Sutton-in-Craven; 2, H. Watson, Keighley.

Class 25.—Cancelled.

Class 26 (6).—Aylesbury duck or drake: 1, Ep., 2, 3 a V.H.C., Mrs. Wilson, Denholme.

Class 27 (9).—Six Brown Eggs: 1, Sp. and V.H.C., Mrs. Smith, Baildon; 2, J. Wilson, Penrith; 3, Miss M. Sto Keighley.

Class 28 (5).—Six White Eggs: 1, N. Hiley; 2, Mrs. Brow Southwell; 3, Miss M. Stott; V.H.C., H. Kershaw, Keighl

Members' Classes.—Class 29 (9).—Clean-plucked fowl: 1 a Sp., E. Hodgson; 2, H. Reynard, Keighley; 3 and Res., Barker, Cullingworth; V.H.C., Miss M. Stott; H.C., M Marsden, Keighley.

Class 30 (18).—A.V. Light Breed Male: 1, Sp., 2 and 3, Whiteoak; Res., F. Waddington; V.H.C., H. Reynard.

Class 31 (19).—A.V. Light Breed Female: 1 and Sp., Holmes; 2, H. Whiteoak; 3, Wright and Fortune; Res., M Clay; V.H.C., Mrs. G. M. Barker, Cullingworth, and W Wharton, Keighley.

Class 32 (23).—A.V. Heavy Breed Male: 1, Sp. and Re A. G. Pitchford; 2, N. Sharp; 3, C. Smith; V.H.C., W. Whart

Class 33 (22).—A.V. Heavy Breed Female: 1 and Sp., Whiteoak; 2, A. G. Pitchford; 3, C. Smith; Res., A. Snowd V.H.C., N. Hiley and W. Wharton.

Class 34 (10).—A.V. Duck or Drake: 1, Sp. and 2, M Wilson; 3, C. Smith; Res. and V.H.C., Mrs. G. M. Barker

Class 35 (19).—Gift Class: 1, R. A. Dixon, Whitsta (ventilated floor for hover); 2 and 3, Mrs. Wilson (Run ducks); Res., W. J. Wilson, Denholme (fretwork article V.H.C., Pinnegar and Co., Birmingham (8 pt. Bacd fountain).

A. WILSON, Hon. Secretary

THE MIDLAND FEDERATION OF FEATHER AND F SOCIETIES.

Strenuous efforts are in progress by the Midland Federat of Feather and Fur Societies in connection with the Si Midland Poultry Festival, which is due to take place Janu 7th, 8th and 9th, 1926, in Bingley Hall, Birmingham.

A number of interesting features are being added to usual programme, and it is hoped to give cinematographic f displays and lantern slide illustrations throughout the wh three days, in addition to the usual lectures and demonstratio

An item of additional interest to the usual programme be a competition for the best kept pens of poultry in Birmi ham and Midland Counties, particulars of which will be inclu in the schedules, which are now ready for distribution am poultry-keepers of every description. Application to be made the Secretary.

Both sections of the exhibiting fancy are well catered fo namely, Utility and Exhibition.

There are individual classes for almost every breed in effort to cater for even bigger entries, particularly in the Util section, than the records that have been established in previ years.

A special feature will be the large section purely devoted poultry breeders' exhibition of day-old chicks and eggs hatching; also the classes for inventions divided into f separate sections for poultry houses, incubators, rearers, an

(Continued at Foot of Column Next Page).

The Palace Show.

The Crystal Palace is a great show; the pity of is, that it does not attract a great crowd, though the attendance was much in excess of it year, it was nothing to write home about. the first day it was decidedly poor, and one d the impression that the majority of those who ned up were exhibitors. On the Wednesday ngs were much better, but the last day was nost as bad as the first. Why this should be is hard to say, the show in itself was wonderful, d there was sufficient to attract and interest n those who are not keen poultry-keepers. ssibly a little more or a little better advertising uld attract the public.

The S.P.B.A. Stand was very effective. Great erest was manifested in our food purchase eme, the sample of ground oats offered at /6 per cwt. proved a great attraction. For the it time in their lives many visitors saw the uine article, and more than one of those who dled it assured me they were not able to buy ything like so good a sample at 20/-. Our shes, fish meals and meat meals attracted many quiries, and many were the congratulations we eived on the enterprise of the Council in undering a scheme which has already been of great efit to the industry, and the development of ich is keenly watched. Many of those who led at the stand wished to know what we could for the smaller poultry-keeper, who cannot take n a 5-cwt. lot. For the present we can only gest that he should combine with two or three ow-members, although we can promise nothing nitely until we see how the scheme develops. ere is every hope, and good reason to believe, t in a few months we shall be able to help him.

the utility section the most marked feature the improvement in the benching of the birds. are a very long way indeed from our fancier nds in the art of showing a bird, but there is arked improvement. One is still puzzled with ard to what judges are aiming at in Rhode nd Reds. While good colour is highly desirable, e is often a tendency to give it a greater imance than is warranted. In the hen or pullet s I am certainly of opinion that Mr. W. nett should have been given the preference the winner, which had a heavy head, and was ned to be coarse, and one would not judge her e a likely layer, while Mr. Hamnett's pullet production written all over her. He won well a very fine cockerel in the cock or cockerel s. Lord Dewar won in White Leghorns with ckerel which was well away from any other , although Mr. Gow's second was very nice ed. Blacks were a good show, and there doubt that they are making great progress. Surely there is no necessity to provide utility classes for Barnevelders, it is a new breed, and a recognised utility breed. The Club has fixed a standard which is in no way opposed to utility characters, and it is the height of absurdity to drive one section to extremes. It is curious that those who chatter so much about the necessity for unity should do so much to widen the gulf. The same remark applies to Cuckoo Leghorns. What bright spirit suggested a utility section for these? Australorps are steadily improving, the Cochiny type is perhaps more in evidence, but there is undoubtedly more uniformity.

Sussex were a great show, even the Buffs, in which there is a marked improvement, came up well. I was interested in the Whites shown by Capt. Chambers. Mr. E. H. Vincent sent me for inspection four beautiful pullets in 1921, I mentioned it in "Eggs" at the time. Last week I saw some competing in the Midland Test. Needless to say, these are sports from the Light, and they are likely to become very popular. Type is already fixed, so that there should be no great difficulty in breeding them. Reds are attracting more attention, but the handsome Browns, grand birds as they are, do not seem to win popular favour.

Bresse continue to gain friends. Mrs. Onslow Piercy again swept the board with Blacks. In the Whites failure was mainly in eye colour, and that distinctive mark of the Bresse, the smutty face, was entirely absent in many exhibits, while there is a tendency to breed too heavy a comb. Mr. Barker's winning cockerel failed badly in lobe, and I thought Mr. Fenwick's bird the best in the class. The winner of hen or pullet class came from the Malvern Pedigree Farm, and was well away a typical Bresse. Mr. G. Fox was a good second.

Wyandottes were the most numerous. Time was when that honour was claimed for the Orpingtons, but their day is apparently over. although breeders are perhaps awaking to the fact that they have killed the breed by their extravagances, and are endeavouring to mend their ways. I hope it is not too late. The 'Dotte breeders are perhaps beginning to realise also that the final word is "Utility," for one got the impression that size was not the fetish it used to be, and that judges are getting more moderate views.

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appliances and accessories, which will be judged by Mr. and Mrs. Tom Newman.

In order to augment the funds for the New Midland Laying Test, which it is hoped to lay down next year, the Midland Federation is again organising a Mammoth Prize Fund Scheme, in which an Austin Seven Motor Car is being offered for the first prize, for the second prize an A.J.S. Motor Cycle and Combination, and the third prize high-class Lady's or Gent's Bicycle.

In addition to these over seven hundred other prizes are to be awarded. Full particulars can be obtained from our advertising column in due course, or direct from the Hon. Organising Secretary, Mr. A. H. Brain, 63, Old Meeting Street, West Bromwich.

Correspondence—Continued

STRAW HOUSES.

Dear Sir,—I was very much interested in the article by Mr. Price on Straw Houses for Poultry, in the Dairy Show issue of "Eggs." I built two straw poultry houses nearly two years ago, and another this year. The birds are very healthy in these houses; they never had a cold even in the bitterest weather last winter. When building the walls, instead of fastening the straw to wire netting, I get some smooth fencing wire, and fixed it to both sides of the posts with small staples, starting at, say, post 14 (on Mr. Price's plan), carrying it round outside the house to post 13 about 15 inches from the ground, and returning inside the house at the same level repeating the process 15 inches higher every time. The straw is then stuffed between these wires by drawing it upwards, and held tight by a string tied to both wires every 18 inches, so that the walls are three to four inches thick, or the same thickness as the posts. I then dug a trench about a yard from the bottom of the house, and packed the soil against the straw—to prevent the birds scratching it away. The thatch is nine to twelve inches thick on the roof, which should be built at a much steeper angle than that shown on the plan. I think it is a mistake to leave the wall at the end of the roof uncovered, as the wind will blow in, and would take the thatch off the roof during a gale unless the house is in a *very* sheltered position. The wind blew in the doorway of my straw house before I had finished it and put the door on, and took nearly half the roof off on one side.

The straw house is delightfully cool in the hottest weather.

Yours truly,
CHARLES COLGRAVE.

THE MARKETING OF ENGLISH EGGS

Dear Sir,—Mr. M. Hammond's denunciation of the *two-ounce egg fallacy* is an opportune and much needed one. My grocer tells me that Danish and Irish eggs are graded to 16lbs. per great hundred. This is equivalent to 2⅛ozs. per egg. How can our diminutive home 15lb. eggs compete with the beautifully graded 16lb. sample? And what a fine advertisement the Dane will have when once foreign eggs have all to be marked!

My grocer (in Glasgow) asks me to grade my eggs to the 16lb. standard, and as he pays me threepence per dozen more than our local price, which itself is always considerably higher than at London, I think his request is reasonable. Therefore, those pedigree breeders (and they are a large and imposing army) who guarantee their eggs for setting to average *two ounces*, do not interest me in the slightest.

Will not the S.P.B.A. support Mr. Hammond and many of us smaller egg producers in a *16lbs. EGG CAMPAIGN?* It would, indeed, be *doing* something—(it is for action that Mr. Hammond appeals)—if an effort were made through the powerful agency of "EGGS" to induce pedigree and commercial breede *in mating up their pens for the approaching seaso* to aim at the *2⅛ozs. egg.* By another year would be too big a step to insist on the 2⅛oz. egg standa for registered pens?

Personally, I think Mr. Hammond's system grading too elaborate, except perhaps for big comm cial farms, and co-operative societies. It is elaborate also, I think for the ordinary small grocer, for the under-cutting by the Co-operative Society, which he refers, this is indeed deplorable from general standpoint. As for the members themsel of such a society they deserve no sympathy.

Again, I repeat, what about a national *16lb. E CAMPAIGN?* It would help the British producer get profitable prices far more than the best "E MORE EGGS" Campaign that ever was devised.

Yours faithfully,
"JOCK."

CORRUGATED IRON SHEETS.

Dear Sir,—While looking through a poultry bo to-day I find the method of fixing corrugated i sheets recommended, which, to say the least of it, ridiculous. That is by nailing it hard down on cross battens. Everyone knows that corrugated i sweats most awfully in wet or frosty weather, and above method causes the sweat to drip into the hou If the bottom corrugation is lifted off the cross b by placing a thimble-shaped plug under the upper rugation, through which the fixing nail should pass, sweat will run to the bottom of the sheet or shee where it would drip to the ground unless a gutter provided. If the gutter is fixed with the outer slightly higher than the bottom end of the shee there should be no danger of the wind blowing th off.

I may add if the above method is used, with addition of an underlining of cheap felting (or other air-tight material) which should be secur fastened to the wall or side and stretched to the rid corrugated iron roofs would be more often seen poultry yards

Yours truly,
J. YOUNG

EGGS AND MEAT.

Dear Sir,—There are two errors in my let under above head, in issue of 18th inst., should like to correct. At end of third paragra it should read "an average of 157 eggs each the **third** year," not three years; their average first year was 214, for second year 174, thus giv an average for the three years of 182.

The other error, which I am afraid was my o is in the last paragraph in the fourth line, it sho read "**156** birds," and in seventh line "**15** birds, and the average is worked out correct these figures

Thanking you, yours truly,
W. M. APPLETON

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, NOVEMBER 20th, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in fair ıpply, and, with a good demand, realises higher prices at ondon and Hull, the average price over the markets reported eing 11s. 5d. per cwt. Imported wheat is in small supply and uotations generally are slightly higher on the week. Trade ɔr homegrown malting barley records little alteration, and verage prices are unchanged, the London quotation being 's. 6d. per cwt. Grinding barley is in little demand and prices enerally are slightly lower on the week, British averaging bout 8s. 8d. per cwt. Home-grown oats meet a quiet trade at ecent values, except at Hull where smaller supplies have ealised more money. Imported oats are scarce on spot and ecent prices are maintained. Maize meets an improved trade nd is dearer at all markets, Argentine averaging 9s. per cwt., s against 8s. 9d. last week.

Bran and coarse middlings are in good demand, the former eing dearer at most centres and now averages £7 12s. as gainst £7 8s. 6d. per ton in the previous week, but the average rice of the latter is little changed at £8 13s. per ton. Meals re firm in value, maize meal being dearer in sympathy with ıe higher prices ruling for maize. Oil cakes meet a somewhat nproved trade, linseed cake selling at late rates, while cotton eed cake is slightly cheaper in some instances.

MILLERS' OFFALS.—Bran (British): Bristol, £7 17s; Hull, 7 12s; Liverpool, £7 15s; London, £7 5s. Broad Bran: Hull, 9 2s; London, £8 15s. Middlings—Fine (Imported): London, 9 2s; Coarse (British): Bristol, £9; Hull, £9; Liverpool, £8 15s; ondon, £7 17s. Pollards (Imported): Bristol, £7 10s; Hull, 6 15s; London, £7. Rice Bran: Bristol, £7 10s; Liverpool, £7 5s. EAL.—Barley Meal: Bristol, £9 10s; Hull, £9 10s; London, 9 17s. Maize Meal: Bristol, £11; Hull, £9 13s; Liverpool, £9 17s; ondon, £10. Maize Meal (S. African): Bristol, £9 7s; Hull, 8 10s; Liverpool, £8 7s; London, £8 15s. Maize Germ Meal: ull, £10; London, £9 5s. Maize Gluten Feed: Bristol, £11; ondon, £9 12s. Locust Bean Meal: Bristol, £10; Hull, £10; iverpool, £9 5s; London, £9 12s. Bean Meal: Hull, £11 8s; ondon, £12 5s. Fish Meal: Bristol, £21 10s; Hull, £20 10s; iverpool, £20 10s; London, £20.

EGGS AND DEAD POULTRY.

Best selected eggs continue to advance in price owing to ıe shortage, while little attention is paid to the fairly plentiful fferings of cheaper sorts. Rather more inquiry is noticeable ɔr dead poultry, but so far little change in price is recorded.

Week-end Prices—Eggs (per 120): British, 33s 9d; Irish, 32s 0d. ls 0d; Danish, 32s 9d, 31s 0d; Dutch, 30s 6d, 29s 0d; French, ıs 0d, 23s 0d; Belgian, 28s 9d, 27s 3d; Italian, 24s 9d, 23s 0d; anadian, 21s 0d, 20s 0d; Lithuanian, 17s 6d, 16s 6d; Polish, ɔs 6d, 15s 0d; Chinese, 15s 3d, 13s 9d; Russian, 17s 0d, 13s 3d; ustralian, 23s 6d, 22s 0d; South African, 22s 0d, 19s 6d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 6d, 1s 2d; Irish, 2d, 1s 0d; Others, 1s 3d, 1s 0d. Ducks, 1s 2d, 1s 0d. Geese, 0d, 10d. Turkeys, 1s 5d, 1s 2d.

EGGS.

Per Doz.—Ashford: First, 3s 9d; Second, 3s 6d. Birmingham: irst, 3s 4¾d; Second, 3s 0d. Bridgwater: First, 4s 1½d; Second, 9½d. Chelmsford: First, 3s 6½d; Second, 3s 4¼d. Colchester: irst, 3s 9½d; Second, 3s 1¾d. Doncaster: First, 3s 10d; Second, 8d. Exeter: First, 3s 6d. Hereford: First, 3s 6d. King's Lynn: irst, 3s 6d; Second, 3s 0d. Llandilo: First, 3s 9d. Mold: First, 6d; Second, 3s 4d. Newport (Mon.): First, 3s 9d; Second, 3s 6d. orwich: First, 3s 4d; Second, 2s 11d. Oswestry: First, 3s 7d. enzance: First, 3s 3d; Second, 3s 2d. Saffron Walden: First, 7½d; Second, 3s 0d. St. Ives (Hunts): First, 3s 5d; Second, 7d. Salisbury: First, 3s 6d; Second, 3s 5d. Skipton: First, 6d. Truro: First, 3s 2d. Welshpool: First, 3s 6d; Second, 3s 3d. arlisle: First 4s 0d. *Derby First, 3s 6d. *Ipswich: First, 6d. *Lincoln: First, 3s 6d. *Shrewsbury: First, 4s 0d; Second, 9d. *York: First, 3s 10d; Second, 3s 9d.

FOWLS.

Per Doz.—Birmingham: First, 1s 2d; Second, 9d. Doncaster: irst, †5s 6d; Second. †4s 6d. Dorchester: First, 3s 4½d; Second, 3d. Exeter: First, 1s 3d. Hereford: First, 1s 2d; Second, 1s 0d. landilo: First, 1s 7d; Second, 1s 4d. Newport (Mon.): First, 6d; Second, 1s 2d. Truro: First, 1s 4d. Welshpool: First, 6d; Second, 1s 4d. *Derby First, †5s 6d; Second, †4s 0d. pswich: First, 1s 5d. *Lincoln: First, †5s 6d; Second, †3s 6d. hrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 0d; cond, †4s 0d.

DUCKS.

Per Doz.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: rst, †6s 0d; Second. †5s 0d. Dorchester: First, 2s 1d; Second, 10d. Exeter: First, 1s 2d. Hereford: First, 1s 2d; Second,

(Continued at Foot of Next Column).

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, November 25th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for every-one concerned.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

PROOFS.—We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

KEIGHLEY AND DISTRICT BRANCH.

Mrs. Wilson, Secretary of the Keighley and District Branch, asks me to announce that the Cups won by members of the branch in the Federation Laying Test, and in the Second Annual Show will be distributed in the Crotona Hall, Keighley, on December 2nd, at seven o'clock. A Semi-Whist Drive and Social will follow the distribution of prizes. All members and friends are cordially invited.

1s 0d. Llandilo: First, 1s 7d; Second, 1s 4d. Welshpool: First, 1s 5d; Second, 1s 3d. *Derby. First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 4d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 6d, Second, †5s 0d.

*** At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.**

Classified Advertisements.

(PREPAID RATES.)

1d. per word—minimum charge, 1s. 0d.; 13 insertions at price of 12. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS,	per line, extra 9d.		
DAY-OLD CHICKS,	,,	,,	1s.
DAY-OLD CHICKS	,,	,,	1/6

The number of letters, punctuations and spaces between words should be totalled, when the following table will be of assistance:—

9d. size allows for Thirty-one to one line.
1/- size allows for Twenty-seven to one line.
1/6 size allows for Twenty-one to one line.

When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

N.B.—Advertisements, unless accompanied by correct amount, will not be inserted.

Advertisements must be distinctly marked with the Heading under which they are to appear.

Advertisements must be written on a separate sheet of paper, and one side of the paper only.

Name and Address to be counted. In the case of a Box Number being used, the words, "Box," "Eggs," 94, Farncombe Street, London, S.E.16, to be counted as eight words, i.e., making a total extra charge of 1s. 8d. (1s. for Box; 8d. for address) per insertion.

Advertisements must reach this office
FIRST POST FRIDAYS
for insertion in the following Wednesday's issue. Those received after this time will be inserted in the next issue.

PLEASE WRITE CLEARLY, and TO AVOID MISPRINTING OF STRAINS, NAMES AND ADDRESSES, THESE SHOULD BE WRITTEN IN PRINTED CHARACTERS.

Displayed Advertisements.

Ordinary Page, £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 9d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Positions by arrangement. Discounts for Series. Full Scale of Advertising Rates on application.

Advertisements, addressed to Mr. S. H. BURLES, "EGGS," 94, FARNCOMBE STREET, LONDON, S.E.16, MUST REACH US BY FIRST POST FRIDAY MORNINGS. for insertion in following issue. Those received later will be inserted in the next issue.

A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to The Beeches, Rudgwick, Sussex.

EGGS.
FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C.,
Longwick P.F., Princes Risborough, Bucks R.I. Reds, Runner and Khaki-Campbell Ducks. Eggs, Chicks and Stock Birds. List free. Satisfaction insisted on.

Eggs determine feeding costs

IT'S not the cost of feed that counts, it's the cost of producing eggs.

Ful-O-Pep Mash makes fowls lay better eggs and for a much longer laying period. At the same time it increases stamina and constitutional vigour. That is why Ful-O-Pep eggs are so economically produced.

Ful-O-Pep-raised birds are "full of pep." See their wonderful health and vigour—look at their glossy and well-grown plumage. A feed that will grow good feathers always produces best conditioned birds—the kind that lay best and longest.

Ful-O-Pep Mash is made from eleven different ingredients and contains just the right amount of amino acids and minerals scientifically blended.

FUL-O-PEP TRADE MARK
LAYING MASH 7

NO MIXING: NO HEATING WATER: NO TROUBLE

The Ful-O-Pep Handy Monthly Guide tells you all about correct feeding. Save time and money by sending a postcard for a copy to-day. This book has detailed suggestions for every month in the year. It also contains 12 monthly egg charts for you to record your eggs. Free and postage paid.

Ful-O-Pep Poultry Feeds are made and guaranteed by
QUAKER OATS Ltd., 11, Finsbury Sq., London, E.C.2.

EGGS.
FOR SALE.

Light Sussex Eggs (Cook's-Slade);
dozen. White Wyandotte (Barron's);
dozen.—Miss Gregg, Little Chart, Ke

Capt. BARNES, KENILWORT
Light Sussex or R.I.R. Eggs ror
framed birds; 45s., 100; 24s., 50;
Now ready or for later delivery. Also
and White Leghorns

EGGS FOR SPRING CHICKE
Dr. Harbord (winner, 1st Bath and
Table Fowl) is now booking orders
livery. October onwards; £3 per 100;
for 15. No replacements. From his
Light Sussex and R.I.R. Pens; note
stamina, size and quality.—Detling,
stone.

LIGHT SUSSEX EGGS,
For Spring Chicken trade, but
enough to save for stock birds
hens; 50s., 100; Red and Brown Susse
100, or 45s., mixed. Selected Stock, 10
My strain was started 1905, and is
the finest in the country for eggs an
points.—Hodges, Heathfield, Sussex.

EGGS AND CHICKS.
FOR SALE.

Light Sussex Eggs; 100, 40s.; 50, 20
riage paid. Chicks double.—Paynte
Lawn, Lampton Road, Hounslow.

MARSH DAISIES.
Orders now being booked. Wheate
and 16s. Buffs, Blacks or Whites, 1
sitting. Chicks double.—Hemelryk, O
House, Partridge Green

LA BRESSE.
Orders now being booked. Whites, 1
sitting. Chicks double.—Hemelryk, O
House, Partridge Green.

EGGS FOR SPRING CHICKE
2oz. Eggs from big-framed Light
45s., 100 – Major Disney-Roebuck,
Meavy P.F., Yelverton.

TABLE POULTRY.
Eggs from Special Table Crosses, f
ducing highest class Spring Chicke
6d. dozen; £3, 100 Unfertiles repla
Simmins, M.S.P.B.A., Heathfield,
Established 1911

SPRING CHICKS!
SPRING CHICKS!
Thousands of Fertile Eggs availabl
large-framed Light Sussex; 50s., 100;
500; £21 5s., 1,000. Assorted Susse
Red, Buff Orp., White Wyandotte
Barred Rock eggs; 45s., 100; £10, 5
15s., 1,000. Unfertiles not replaced;
cent. fertility guaranteed. Order n
fore the rush. Eggs ready now,
be despatched on dates specified if
in time. Day-Old Chicks available
January. May we quote you for y
quirements? We have a flock of
5,000 hardy, healthy birds. Send fo
trated Catalogue, free.
EASTMAN BROS.,
SUFFOLK POULTRY FARM,
HADLEIGH.

DAY-OLD CHICKS.
DAY-OLD CHICKS.
I am now hatching about 20 dozen
Sussex and W. Wyandotte Chicks pe
over and above my own requiremen
are from my best stock, consist
mature birds of massive frame a
texture, and eminently suitable for
table chicken trade. I am prepared
orders for regular supplies over
of one or two months; 10s. 6d. pe
Carriage paid. — Harold Record, S
Fordingbridge, Hants.

GOLD MEDAL STRAIN
WHITE LEGHORNS.
Winners of National Laying Test,
2, 1925. Booking sitting of eggs, 15s.
Pullets, Cockerels, from 12s. 6d. e
Bingley, Balsham Manor Farm, Cam

EGGS

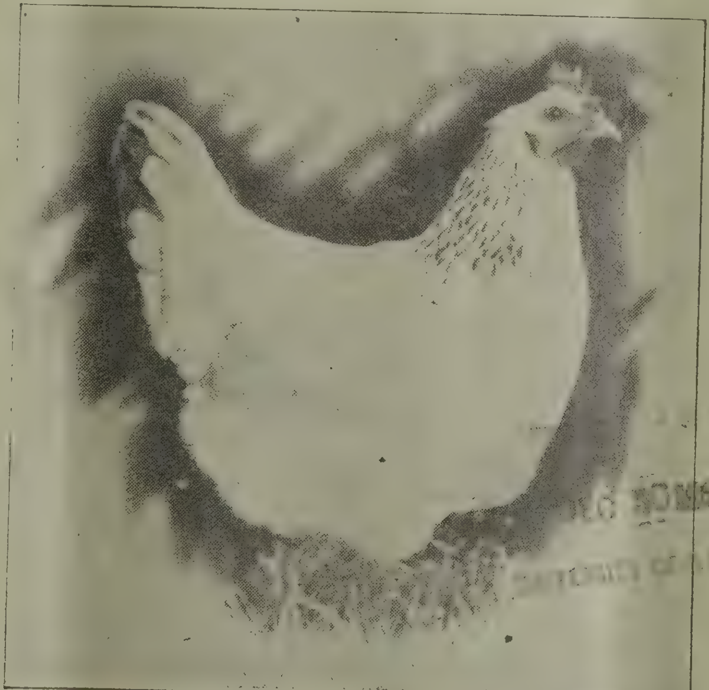
THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

gistered at the G.P.O. as a Newspaper.
l. XII. No. 23. Copyright.

Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months " " 6/4
Three Months " " 3/3



LIGHT SUSSEX HEN.

First in Harper-Adams' Single Pen Test. 255 Eggs in 48 weeks.

Bred by and the Property of
W. M. GOLDEN, Eaglesfield Poultry Farm, Leire, Rugby.

EXAMINE MY PRICES

ARE YOU PAYING MORE?

WHY NOT BUY YOUR MASHES AND CORN AT MARK LANE PRICES?

Reduce Food and Labour Costs—Increase Your Egg Yield!

THE VERY BEST INGREDIENTS AND CAREFUL MIXING GUARANTEED.

Assorted order or any one grade.	1 ton. s.	d.	10 cwts. s	d.	5 cwts. s	d
Tom Newman's Laying Mash ...	10	7	10	10½	11	0
Tom Newman's Growing Mash	11	0	11	1½	11	3
Tom Newman's Breeding Mash	11	6	11	7½	11	9
Poultry Mixture, sifted, very best	12	0	12	6	12	9
Kibbled Maize—no better obtainable (screened)	11	6	11	9	12	0
Ground Oats—the genuine article	12	6	12	9	13	0
No. 2 Canada Western Oats	11	9	12	0	12	3
Meat and Bone Meal	14	6	14	9	15	0
Yellow Maize Meal or White	10	9	11	0	11	3
Maize Germ Meal	9	9	10	3	10	9
Alfalfa Meal—very best quality	13	3	13	9	14	3
Soya Bean Meal (Extracted) ...	12	9	13	0	13	3
Oyster Shell	5	6	6	0	6	6
Cockle Shell or best Flint Grit	3	6	4	0	4	6

Per cwt. free on rails at Horley Stn. Delivered within 15 miles at small advance. For smaller quantities add 3d. per cwt. to 5 cwt. prices. Carriage paid prices quoted, also any other article and samples supplied. Granaries always open—you can watch mixing and examine ingredients.

F. A. YOUNG Junr.,

Farmers' Service Stores, STATION ROAD, HORLEY.

Bankers: Barclays, Horley 'Phone: Horley 279.

Satisfaction Guaranteed. Unsolicited Testimonials Sent.

LIGHT SUSSEX COCKERELS

Early hatched from individually recorded non-broody Hens!

The "HEYDOWN" STRAIN of Light Sussex will be found to combine the incomparable table qualities of the breed with unusually High Egg Production.

JOHN H. DOWDEN & SON,

"Heydown," Heathfield, Sussex.

The 'Eclipse' Poultry Houses

Manufactured by a PRACTICAL POULTRY FARMER.

A No. II.
(60 ft. x 12 ft.)
Supplied to
Capt. J. C. Sutton,
Parklands,
Mayes Green,
Ockley, Surrey.

SATISFACTORY VENTILATION IS PROVED BY RESULTS, NOT BY THEORY ONLY.

Our own experience over a period of nearly 10 years with "Eclipse" Houses has been absolute immunity from colds, roup, or kindred ailments amongst the stock so housed.

This we believe would also be the testimony of all our customers. With these houses FLOOR VENTILATION is not necessary, but is provided for and obtained when desired by the simple adjustment of window buttons.

Fullest enquiries and inspection invited.

HERBERT W MARTIN, PERIVALE POULTRY FARM & APPLIANCE WORKS
EAST HARLING, —— NORFOLK

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, DECEMBER 2nd, 1925.

Editorial.

PROFESSOR THOMSON TELLS US HOW.

> "It's easy enough, he says, to increase the egg output of our fowls by 50 per cent., and that without increased expense."—("Smallholder.")

Sounds sensational, doesn't it? But the ques-
n arises to whom is Professor Thomson address-
g himself, to the average commercial egg farmer
this country, or to the ordinary farmer who
es not trouble himself about fowls? If to the
ter we can understand, if to the former we can
ly suggest the Professor is talking without his
ok. On the average commercial egg farm in
is country the production per bird is about 150
gs, and Professor Thomson calmly tells us that
s **easy** to raise it by 50 per cent., or to 225 eggs
r bird. We will do him the justice to think that
believes what he says, and bless his simple
th. And what is the solution of the problem?
ensive poultry-keeping, feeding, "full and
nty," and, as we have shown in another place,
ding eight varieties of grain, some of them so
pensive as to be prohibitive in this country, as
ainst the two or three varieties commonly used
re, and a mash consisting of three kinds of
al, as against one in which we use five or
, or maybe seven. What is there in it? We
d some of our carbohydrates and fats in the
sh and in the grain, he feeds them practically
in the grain. We feed them in the more
estible form, i.e., mealed, and he asks us to
ieve that because of this slight difference he
able to get 50 per cent. more eggs from the
stralian hen, and that climatic conditions have
hing whatever to do with the better results
ich he claims.

> "We have now thousands of breeders who can do their average of well over 200 eggs per annum. My own hens do over 300."

rofessor Thomson should have said a little
re or a little less. We are perfectly sure he is
asking us to believe that his own hens
ERAGE over 300 eggs per bird, yet that is
at he has conveyed. When he speaks of his
usands of breeders who can do their average of
well over 200 eggs per annum, of what class of breeder are they, and what number of birds do they keep? What are the flock averages of flocks of, say, 400 or over? We have several birds which have laid over 300 eggs in this country. A Wyandotte laid 324 eggs in the twelve months in the Northern Ireland Test, and a Buff Orpington pullet bred in this country, competed in one of the American Tests, and laid 343 eggs. The Professor should be a little more explicit—what is the size of his flock which average over 300 eggs?

The world has not discovered what a true intensive house is, at least Professor Thomson says so, and we are inclined to agree with him so far. Now let us see his own views :—

> "My idea of an intensive house is one I use myself, a house in which I ran 200 laying hens for five years without ever cleaning it out."

Does Professor Thomson think we clean out houses fairly regularly because we like doing it? Does he imagine that climatic conditions have nothing to do with it, that for him it is an easy matter to keep his litter dry, and that here it is an utter impossibility, and that damp litter is one of the most fertile sources of disease?

The house appears to be one of the ordinary lean-to type. Professor Thomson's description is as follows :—

> "Look at an ordinary fowl house to-day in Britain. Look at all the roosts, they are all waste of timber, and waste of labour, and breeders of disease. Look at the dropping boards. They are all not only lumber, but waste of timber more so than the roosts; breeders of disease a hundred times more so than the roosts. Look at all the nests inside; look at them covered with droppings; awful to look at, aren't they? Quite repulsive.
>
> Cut them all out. Not only are they all unnecessary, but they are a menace to your fowls. Inside an intensive house there should be nothing whatever in the way of lumber, only the four bare walls. What a saving of labour, what a saving of disease, what a saving from loss.
>
> The floor of an intensive house should be raised higher than the surrounding surface to prevent damp. It can be either natural or boarded, so long as it is higher than the surrounding surface. It should be first covered

> with about 1½ inches deep of sand, coal ashes or wood ashes. Then—but let me here point out to you that what I am going to say is the basic secret of success in all intensive poultry-keeping ventures—over the sand, or ashes, put straw, dry grass, peat moss, or any dry litter.
>
> The deeper this litter, the better. Mine is 3 feet deep! I have seen nothing deeper in this country than 3 inches, which is not a tenth part of what is required.
>
> With the four bare walls and the bedded house, everything is there which the fowls require, except the nests. In my houses the nests are built outside the building, with a shutter which can shut all the hens off from the nests in the evening, to prevent them from attempting to roost or go broody in the nests.
>
> All houses must be of first-class construction, well ventilated but free from draughts and absolutely dry. The two secrets are the basic sand bottoms and absolutely dry conditions, neglect of either of which will cause failure."

We fancy Professor Thomson has been content to visit one or two general farms in this country, and so form his estimate of British poultry farming, or he has viewed everything with a jaundiced eye. Presumably he imagines that he is telling us something very original, and as far as houses without perches are concerned he certainly has. But he has not yet convinced us that it would be wise to adopt such methods over here, and before he makes such a sweeping denunciation of our methods it would be wise to be acquainted with our conditions. We are certainly of opinion that a bunch of fowls would be healthier when perching than when crowded together on the floor.

With regard to his comment on nest boxes, we have never seen them covered with droppings as he describes, and is there not just a possibility of a large number of eggs being laid and lost in that 3 feet of litter, without Professor Thomson's hens are especially well conducted? He is entirely wrong when he says our system of housing and feeding are entirely obsolete. They are far better adapted to our conditions than those he describes, that is a point he entirely misses.

> "There are only three breeds worth keeping: Black Orpingtons, which he maintains lead the world, White Leghorns, and Langshans."

This is sheer nonsense. We have Wyandottes, Buff Rocks, Black Leghorns, not to mention Sussex, which is probably a better breed than either of those he mentions. His challenge to test the Black Orpingtons with our "star" breeds, as he terms them, has already been answered. They have competed in our National Tests, and the result has been that they have compared unfavourably with our own breeds. If those who import them had value for their money, and if they a in any way representative of the breed, we c only say Professor Thomson will have to dem strate this to us in a practical manner. There one thing he has to learn, and that is t tremendous influence of climatic conditions.

(Continued at Foot of Next Column).

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, wi answers all queries relating to Ducks. In cases of extren urgency answer would be direct, otherwise they will appe in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarri Road, West Worthing.**

Bodies should be packed and sent by post immediately aft death, marked for immediate delivery. The fee is 5s. for reply by post. The name and address of the sender shou be distinctly marked on the package. Advice of dispatch a fee should be sent under separate cover to Major Saunder

Readers are particularly desired to observe the above rules wh sending birds for post-mortem examination and also as writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to n members of the S.P.B.A. on payment of a fee of 2s. 6d. p letter. These are answered by the Editor, and relate every phase of poultry-keeping except post-mortem exami tions. Members of the S.P.B.A. are entitled to a reply by p by the Editor by virtue of their membership (NOT fr Major Saunders).

ALL questions should be addressed to the Editor. Major Saund does not reply to questions either by post or through th columns, except in relation to Post-Mortem Examinations.

"Regular Reader" (Horbury). The sample of ma is a very good one as far as the quality of the i gredients is concerned, but I think it would be adv able to reduce the bran by one pound for the fow for winter egg production. Under your conditions would change to the following formula:—1lb. bra 1lb alfalfa meal, 4lbs. middlings, 1½lbs. maize me ½lb. ground oats, and 1lb. fish meal. This is very la for your R.I. Red March pullets to be still in t moult. I should add four per cent. linseed meal the mash, and give the birds a little iron tonic follows:—Dissolve two ounces of sulphate of iron in quart of water, and add one tablespoonful of the so tion to every pint of drinking water, and continue a fortnight, giving it a week's rest. This would ass them now With regard to the rats, I am afraid cannot advise you as to their extermination. T greatest success which I have obtained in getting of them was to place a galvanised bin 2ft. 6in. high the centre of the house This was filled with me and the quantity gradually reduced until it got ve ow. When the rats jumped in they could not crawl p the sides of the bin and consequently were trapped nd killed. Either water glass or lime are the best neans of preserving eggs for future domestic use, but f it is not intended to keep them for a long time, imply buttering them will answer.

"Beginner" (Somerset) writes: "My pullets do not ppear to eat enough mash. The result is they are not aying at all well. I also find them thin about the bdomen. All the pullets have shown signs of broodi- ess That accounts for low production to a certain xtent."--It is extraordinary that *all* the pullets show igns of broodiness at this season of the year, and my npression is that they are not a very good lot. The act that they are not producing would be one reason or the low consumption of mash, but as "Beginner" nds them thin about the abdomen the probable cause that they are in under condition. I should, there- ore, be inclined to give them a small feed of wet ash at mid-day. Just moisten some of the dry mash ith cold water. I expect this poor production is the esult of poor condition

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G. K. B. (Henley-in-Arden) very kindly sends me me suggestions on poultry house construction, and escribes an "Apex" house, 12ft. x 8ft, with drop- ng board Unfortunately I cannot reproduce same, the diagrams are not clearly enough defined. His indows and nest boxes are on one side. and the opping board on the other. He employed the induc- on system used in the latest monkey house at the Zoo, e inlet valve employed being a Tobin's Tube with a riable valve. On top of the tube there is an outlet the ridge, which G. K. B. says has proved most ccessful, and he is about to construct a 32ft. x 12ft. x ft. Apex of fibre cement sheeting. He encloses mples of foodstuffs. Meat meal at 20s. cwt., de ered to door. This is fairly satisfactory. Sharps at s 9d. per 1½ cwt., which are good. Ground oats at s., which are only just fair. Maize meal only oderate. Broad bran good sample. but at 12s. cwt. a very high price. G. K. B. asks if I think birds ould lay any better if given warm water to drink, st keeping the water warm with a small lamp under Yes, I think this is most likely, particularly where y mash is fed, as birds in very cold weather do not nk water so readily

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F. N (Linfield) sends samples of the ingredients of mash which he himself mixes, and which his birds ll hardly touch. The broad bran at 10s. 9d. cwt. is oor sample, and is merely ordinary bran which has en passed through the rollers twice and flattened out. ound oats at 15s. 3d. are not "Sussex" ground, but good value for the money, and might be used in ce of Sussex ground oats. The sample of middlings 11s. 3d are of fair average quality. Fish meal at is a good sample I cannot detect anything in y of these ingredients which would prevent the birds m eating it. The birds are on three-quarters of an e of grass. I would suggest to "F. N." that he nges his methods of feeding. and instead of feeding ounce of grain in the morning and night, that he gives the whole two ounces at night, and none in the morning, leaving the birds to forage for themselves, and go back and eat the mash. It is probably this ounce of grain in the morning which is preventing them consuming sufficient mash, and thus the small egg production.

M. M. (Tower Hill) wishes to change from wet to dry mash. She has 60 pullets and 40 two-year-old hens. All these have been laying quite well during October, and now her object is to change to dry mash, and save labour, and she wishes to know whether the change suggested would be likely to cause a drop in the egg yield if carried out at this time of the year. I do not think such a change could be made at this time of the year without causing a drop in the egg yield It would be better to wait until the Spring. The change should be very gradual in any case. Dry and wet mash should be both fed for a few days, and then the latter gradually reduced until the birds could do without it, but I would not under any circumstances change it at this time of the year, particularly as the days are so short. Her present method of feeding is quite satisfactory. She need not be afraid to feed the kibbled maize.

N. F. H. (Kilkenny) wishes to know how to improve size of Black Minorcas. She complains that they used to be so much bigger than the Leghorn, but nowadays they are gradually becoming their size, and smaller. Her birds actually have laid a good two-ounce egg and over, but she considers they are on the small size, and she is wondering if she could improve the strain by crossing with a black heavy breed of a good egg strain. She does not like crossing and knows I do not approve of it always, but would be glad of my opinion. Would it help, she asks, to import a few sittings from Spain? "N.F.H." could not make a greater mistake than to cross with a black heavy breed. It would take years to get the Minorca type again, and, not only that, when you cross for a specific purpose, such as improvement in size, it is always well to remember that you bring in other factors, many of which are undesirable, besides size—slow maturity, and broodiness for example—which would take some years to eliminate. The best plan to follow would be careful selection, fixing a standard size from which to breed, and not using precocious pullets. A male slightly above the average size would have to come from a dam with a good record to help matters, but if there is any loss of size on the female side she will not get much help from the male. That is the best advice I can give "N.F.H." I do not think she can improve her strain by importing bigger birds from Spain. She could improve size by careful selection and fixing a standard which she thinks desirable.

"Anxious" (Carterton) writes asking if, when recommending no oats at this season of the year, I mean during the moult, or all through the winter. I do not consider oats are such good egg producers as either wheat or maize, and for that reason I do not recommend feeding them, especially during the winter months. The formula for the Wellingham mixture was as follows:—20 lbs. bran, 45 middlings, 10 Sussex ground oats, 10 maize meal, 5 dried yeast, 5 soya bean meal, 5 dried milk. My correspondent encloses two samples of toppings—one at 12/4, which makes the mash very wet and sticky, and the other at 10/6. She is mixing the two. No. 1 is equal to a low-grade flour, and this accounts for its making the mash sticky. The combination of the two is quite all right. The meat meal is a fairly good sample at 17/6. There is sufficient bone in it without the addition of any more.

H. M. W. (Hele) is using the following dry mash for layers:—8 parts middlings, 4 bran, 2 ground oats, 2 maize germ, and 1 fish meal, and 1 dried yeast. He wishes to now know our formula. "H.M.W.'s" mash is practically an S.P.B.A. formula, but as unextracted dried yeast is now not an economical food I would suggest he doubles the amount of fish meal, or, to make the mash cheaper still, that he obtains a sample of meat and bone meal. If this latter has 50 per cent. albuminoids he would not find the results greatly differ from those obtained when using fish meal.

MEMBERSHIP OF THE S.P.B A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, of farmers on a large scale to render themselves eligible for membership of the S.P.B.A This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year began on 1st September.

HANTS LAYING TRIALS.—First Period.

Section A.—Mr B A. King (W.L.), 63 eggs; Mrs. T. P. Cordery (W.L.), 54; A. F. W. Holdaway (W.L.), 50.

Section B.—Miss W. Clarke (W.W.), 74 eggs; J H. Thompson (W.W.), 29; Mrs. T. Cordery (W.W.), 28.

Modern Poultry Feeding.

By TOM NEWMAN.

SOMEONE ASTONISHED.

I have received the following letter from Mr. G. H Palmer, of Winchester:—

> "Sir—I was astonished to read in 'Eggs' that you advi kibbled maize as the grain ration for egg production. My R. I Reds and Wyandottes are laying—but not on maize—50 per cen of eggs. I would avoid such a feed as I would poison. It attai its immediate end, but its final results, in my experience, spe disaster. Maize fed so inevitably lays the foundation of intestin fat. is the prime factor in early broodiness, especially wi heavy breeds like the Rhode Island Reds; but even with Le horns it is inadvisable and risky. No, Sir, the only sou advice for egg production in winter is a balanced ration. don't suppose you will publish this emphatic protest, but y ought to do so, because it is the truth and of vital concern every poultry farmer."

Why I should not publish this emphatic protes passes my comprehension I have possibly had a much experience with maize feeding as Mr. Palme and he has merely made an assertion which he tel us is the truth. What evidence has he to offer th he is correct in what he says? He states that it the prime factor in early broodiness. I have fed som hundreds of Rhode Island Red pullets on maize th year through, and have sometimes badly wanted broody hen in January and February, and there w not one to be had. Has Mr. Palmer any figures h can give us, comparison of two flocks, the one fe on maize, and the one not? If so, and he will sen them to me, I shall be only too pleased to publis them, but let them be comparative figures, or the will be of no value—that is, birds of the same age ar breeding.

Now we come to the old story that maize lays th foundation of intestinal fat. It is very old, and i origin has often been explained in these column Mr Palmer may be assured of one thing that a he in production will not put on internal fat, even if sh is fed on maize, but she will put on internal fa whether she is fed on maize or not, when she is n producing. A hen that is producing eggs is not ab to store fat in any quantity. She needs it to for yolks of eggs, and if there is a shortage of fats in th food she will draw very heavily on her bodily reserve There are individuals with a predisposition to put fat, and they would do so, however they may be fe I must assume, as Mr. Palmer asserts that maize the prime factor in early broodiness, that he believ that broodiness can be induced by feeding what a known as "heating" foods. Has he ever tried feedi heavy breeds on maize to induce broodiness? I hav and failed signally, for I once believed as Mr. Palm does, and said so, and had to acknowledge myself the wrong.

Now I am going to quote, for Mr. Palmer's benef Professor Thomson, poultry adviser to the Hawkesbu Agricultural College, Sydney, Australia.

I would rather not do this, for it is rather irritating to be told by one who is certainly not well acquainted with the conditions here. that we are 25 years behind the times; but the information will be helpful to Mr. Palmer. This is taken from an article by Professor Thomson, in the "Smallholder":—

> "Then, again, the universal belief was, and still largely is, that maize, or Indian corn, was no good for egg production. We demonstrated to the world that maize is the most valuable poultry food, and can be fed largely to fowls."

In America maize is fed in far great proportion than any other cereal, both in the mash and as grain, while the same rule obtains in South Africa.

As to the remark that the "only sound advice for egg production in winter is a balanced ration," does Mr. Palmer mean to imply that you cannot have a balanced ration if you feed maize? If he does he is surely wrong, and if he does not, would it be a balanced ration if it resulted in the laying on of internal fat?

Now if Mr. Palmer will oblige me with actual comparative figures, showing the increase of broodiness with maize, as against non-broodiness without it, facts which will show that it is risky and inadvisable to eed it to Leghorns, and any other reliable evidence he an produce, I will promise him to publish every word of it. It will not worry me if he proves me rong, and whatever happens I am afraid I shall still ontinue to feed maize. I can't say that the value of naize was demonstrated to me by Professor Thomson, or in my young days boiled maize was believed to be he finest food for egg production, but it certainly did nake old hens and non-producers fat.

THE "FULL AND PLENTY RULE."

Professor Thomson in the "Smallholder"·—

> "Even in enlightened circles the policy advocated by all was, on't feed fowls too much, feed them skimp, feed them just hat they will eat up clean and no more.
>
> There's the crux of the whole question. **You people in the lother Country still believe in that policy;** we in Australia, as result of innumerable experiments. have learnt better. That I why I say you are 25 years behind the times; you are away ck in 1900, instead of 1925."

Now what does this wonderful feeding amount to? he birds are given grain *ad. lib.,* fed at night, in tter, two or three feet deep, kibbled maize. wheat, arley, hemp seed, linseed, canary seed and millet t 7 a.m the birds are given the following mash:—ne part broad bran, three parts middlings, quarter rt meat meal: The bran is wetted with half the lk of water, and dried down with the middlings, d sprinkled over with the meat. At 11 a.m. they t green cut clover or lucerne.

After all this talk of our being 25 years behind, and reference to an English mash, containing seven inedients, as compared with three, we find the real fference is that we prefer to feed more substance to r mash in the way of ground oats, maize meal, or scuit meal, knowing that in this form it is more gestible, while our grain mixture, instead of being mposed of eight ingredients, usually consists of two or three Says Professor Thomson: "Before me now as I write is an English mash recipe containing no less than seven separate ingredients."

Before me now as I write, is an Australian grain recipe containing no less than EIGHT separate ingredients.

Perhaps Professor Thomson can explain to us why such expensive seeds as hemp, linseed, and canary seed are fed for egg production, and when they are thrown into litter three feet deep, whether there is any waste or not? As he says his house has not been cleaned out for five years, the latter question may be rather difficult to answer. He claims that his system of feeding has given the greatest results in any part of the world. I can only advise my readers not to plunge on it. I entirely agree with the professor as to feeding "full and plenty," and acknowledge that there is much under-feeding, to which attention has been called many times in these columns. I have often written that you cannot overfeed the growing pullet or the laying hen. I cannot see that his boasted system of feeding has anything to recommend it over the systems usually practised in this country. It really consists in giving more carbohydrates as grain than in the mealed form, and that is all

GLOUCESTERSHIRE LAYING TEST.

For Month ended November 6th.

The following is the report on the Gloucestershire Laying Test (under the supervision of Mr. L. G. Price, County Instructor in Poultry Keeping) for the first month ended November 6th:—

There are 320 pullets and 37 ducks competing, and during the month 4,139 eggs have been collected in respect of the former, giving an average of 12.9 per pullet

The weather during the early part of the month was wet. There appears to be less number of birds showing signs of moulting than in previous years. The majority of the pullets are of good size, type and quality, and it is evident that all have settled down well.

The method of scoring for the month under review is:—

Grade A. and B. eggs count 5 and 4 points respectively, and Grade C. eggs are recorded, but no points awarded

Section A. (1). White Wyandotte (Professional). (Five birds constitute a pen)—T. L. Davies, 526 pts.; H. Ludlow Hewitt. 480; G W. H. Roberts, 435; P. M. Hinton, 386.

Section A. (2). A.O.V. Heavy Breed (Professional).—C. D. Pratt (Buff Rock). 522; G. H. H. Simmons (Buff Rock), 519; G. B. Metcalfe (R.I.R.), 510; M. C Beale (R.I.R.), 447.

Section A. (3). White Leghorn (Professional).—Sherborne Park P.F. (36), 511, Bibury P.F., 442; Sherborne Park P.F. (1), 412; J. L. Brown, 407

Section A. (4). A.O.V. Light Breed (Professional).—F. W. Clifford (B.L)., 380; J L. Brown (Ancona), 343; H. S. Hitch (Ancona), 273; Capt. E. Anderson (Ancona), 236.

Section B. (1). A.V. Heavy Breed. (Confined to owners of not more than 50 laying head).—G. D Bond (W.W.), 478; W. P. Merrett (W.W.), 449; E. A. Craft (L.S.), 278; J. C. Dee (R.I.R.), 222

Section B (2). A.V. Light Breed. (Confined to owners of not more than 50 laying head).—E. G. Brown (W.L.), 180; C. E. Skirten (W.L.), 147; F. E. Fowler (B.L.), 83

Pen Duck Section. (Four ducks to a pen).—S. J. Phillips (K.C.), 80; G. H. H. Simmons (K.C.), 73; Mrs. H. L. Hanks (K.C.), 68; G. B. Young (K.C.). 48.

SINGLE PEN SECTION.

Section 1. White Leghorns.—Fielding Smith (4), 115; L. Grist (14), 115; Churchdown P. Farm, 105; G. H. H Simmonds, 95.

Section 2. White Wyandotte.—H. W. Stephens (30), 120; Miss H. Baylis, 114; F. A. Welch, 105; L. Grist, 105.

Section 3. Rhode Island Red.—F A. Welch, 105; W. Bingle, 90; Miss M. Lawrence, 90; M. C. Beale, 85.

Section 4. A.O.V. Light Breed.—White and Martin (B.L.), 75; Churchdown P.F (B.L.), 30; R. Sysum (B.L)., 25.

Section 5. A.O.V. Heavy Breed.—Philip Clapham (Buff Rock), 110. Mrs E. Weinholt (Aus. Orp.), 110; G. B. Young (L.S.), 105; J G. Herbert (B'Veld), 104

Section 6. Ducks.—G. H. H. Simmons, 28; Major J. G. Dugdale (3), 27; H. L. Hanks, 27; H. W. Fowles (9), 24; H. W. Fowles (2). 24

(Signed) R A. and A. M. JOHNSON,
The Cotswold Poultry Farm, Chalford.

H. S. WRIGHT, Hon. Sec.,
Shire Hall, Gloucester.

A Year on a Poultry Farm.

By **Lieut.-Colonel J. MACRORY, D.S.O.**

CHAPTER IV.

In the first three chapters we have dealt chiefly with the rearing of chicks, the vagaries of incubators, and such like—in other words, chiefly with the **expenses** of this highly scientific profession.

But there is another side, which is really the important side, and that is the **income** side.

Let us now consider this problem.

In all commercial egg farms at least three-quarters of the income is derived from the humble market egg—the type that accompanies the breakfast bacon—not the high-grade, heavy density ovoid that enters the jaws of the incubator—the real income provider enters the jaws of the men and women of this great historic Empire. The incubators, the brooders, and all that sort of thing are only a means to an end—a highly scientific means to a highly desirable end, the accumulation of vast wealth in the pockets of the bloated capitalist who runs the whole vast enterprise.

Now let us consider the income side of Ardmore Poultry Farm.

Very unsatisfactory in the spring of 1924.

During November a new poultry genius had been enrolled on the staff. Needless to say he knew all that there was to be known about the humble hen-bird, whose scientific name is, I believe, the Common Gallinule. Equally needless to say, I (at first) believed him implicitly, and let him have his own sweet way with the hens. Up went the egg supply in November, 1924, and up went the prices.

Excellent! I had no fault to find. At the end of November, 1924, I had pouched nearly £300 out of the common or garden eating eggs, and was promised even more glowing things in December.

Alas! it was not to be. December fell off, and I only pocketed £200 odd for the practically pure albumen sent out from this farm.

The downward curve became more strongly pronounced during January, and the expert hinted darkly at cheap feeding and other errors on my part as the source of the trouble.

The curve continued to drop.

We bought the most expensive food on the market and ran riot in our expenditure.

The curve continued to drop!

By the end of February I was a broken man, and most of my rare eggs were broken too, as the results of thin shells and other defects.

Luckily March came along, and (as dear old Walter Hogan puts it) even the worst hens will lay a few eggs "when the crows lay."

Between the hens and the crows I did manage to market a few eggs in March.

In April a rapid increase took place—the hens were thoroughly ashamed of themselves, no doubt, and did their best to make up for past errors.

But evil is wrought by want of eggs as well a by want of legs. I have written before about the troubles caused by the dreaded "leg weakness" in chicks, but it is as nothing compared to th more terrible crime of "egg weakness" in thei parents. What is the good of laying five eggs a week in March at a penny each, when you hav laid no eggs per week in December at fourpenc each? It is, to say the least of it, a poor sort o gratitude towards the now unbloated capitalis who has provided you with food, shelter and amuse ment during the winter months.

The best remedy against this sort of thing i that advocated by the late Lord Fisher, "Sac the lot." The only objection to this excellen advice is that if you continue to sack the lot when ever they happen to displease you, you will soo have no lot to sack. In other words, you wi cease to be a poultry farmer.

So that it is evident that we must use moderatio even in this sacking business.

On looking back over this period of the Ardmor history, I have come to the conclusion that th hens were forced during November, and that paid heavily for this forcing for the next thre months. Luckily, however, we did not force th breeding pens, and my four hundred best bir laid steadily an average of about one egg per bi per month during November and December, 192

Egg farming, as you will now see, is a high lucrative profession.

From my records of five years I trace that have always two very unprofitable months annual —February and October. Under my system find that egg production falls very heavily February, and, as the price also falls, this mon is the worst of the year for income.

Every October, again, I find egg producti practically at its lowest point. The hens a moulting, and so are the early hatched pulle which start to lay in June and July. The lat hatched pullets are not yet into their stride, that things look gloomy in the extreme. E prices are, however, fairly high in October, that the income is higher than in February. It usually sufficient to pay the feeding bill and t wages during the month, but leaves previous lit to enter the pockets of the owner.

The "October problem" is, in fact, one whi I am perpetually trying to solve, but have not y succeeded in doing.

As far as egg production goes, I find that t months may be placed in the following order **numbers** of eggs:—April, May, June, Mar August, July, September, November, Decemb

(Continued at Foot of Column Next Page).

Straw Houses.

By L. G. PRICE.

In answer to the correspondence in "Eggs," with eference to my article on "Straw Houses," I should irst like to thank the Editor for his note to readers on age 324 of the November 11th issue, that it was not laimed that they were perfect, and that it is easy to ondemn, particularly without having even seen them.

Many poultry-keepers when chatting to me about hese houses have condemned them, but after they ad exhausted their criticisms, I asked them to come nd see for themselves. This offer was accepted in nany cases and after a thorough inspection many ave built them on their own places.

A short while ago the Misses Ransford inspected ome of these houses, and their remarks were: "They ook neat and comfortable, and the stock looks well. Ve shall try them!"

Fielding Smith, late manager to Tom Barron, who uilds wooden houses for sale, said after his inspec ion: "I like them, and shall build one."

These are opinions from practical poultry breeders ho have used almost every kind of house on the arket.

I do not claim them to be perfect, but will be grate- l to your readers for suggestions to make them so.

I do claim that they are are (see letter by "Light ussex") economical in construction, free from raughts where the birds roost, and on the floors, ell ventilated, and that stock does exceptionally well them. Yes, there is a machine that makes ready- ade thatch, which thatch is frequently advertised.

This week I saw a house being made of it, at Mr. F. Thornton's Hinton Poultry Farm, Sharpness, e thatch being supplied by the Cotswold Construc- on Company, and, in my opinion, it looks as if it will effective, and any one can fix it without any know- dge of thatching. It can be purchased in lengths has already been brought to the notice of rural dustries

Re letter by F. J. Hemelryk. Had he inquired for e at the S.P.B.A. Stand at the Dairy Show, he uld easily have got in touch with me, for I spent considerable time there explaining the model I had the stand.

Re the keeping out of rats. If he cares to use a all enough mesh netting, and sink same in the ound two feet, and then turn it out one foot, it will ep them out. Fill all rat holes up with carbide, ur water on same, and stop up holes, and thereby s them

Keep some cats, a terrier dog, and a ferret; use rat ps, and if these methods fail, use one of the poisons at are often advertised as not harmful to poultry.

Yes, a little ventilation will come through the straw, t if he will look again at the plan, he will note that e ends and window also allow of ventilation.

Re the costings. As many of the poultry-keepers in oucestershire are general farmers, the costings are not quite the same, as most of them have the materials on their farms.

They stand well in windy parts. There is one on the top of the Cotswold Hills, and this has stood the test, being about 650 feet above sea level. They are certainly pleasing to the eye.

Here let me add a word for the general farmer, who is so frequently condemned. I find them the best of friends; ever ready to improve their poultry. Teach them that they can build a house with the materials they have on hand, without having to go too deeply into their pockets, and we shall soon see houses on the farm that are comfortable and healthy for the stock, and easy for the farmer's wife to keep clean, and to walk about in.

Readers may be surprised to learn that I have had to write our Editor for as many of the plans as he can spare me, and that most of them are for general farmers, who appreciate the printing of this plan in "Eggs." Mr. Newman may have had some letters to answer on this subject, but I can assure him it has made me some work in that line.

Re letter from B. Reddaway. Unless you have a lease or own the land, it would be as well to build them in sections. As to this type of house being once used in Kent, will he kindly try and get me a photo of same—any old print—for I would like to make comparisons.

Will F. E. Richings please read October 21st issue, page 259.

I put down there the actual costings, so why buy two tons of straw. Get good wheat straw, or even ready-made thatch.

Re three-inch mesh wire netting. Use smaller if you wish to do so.

Dealing with the bottom of the houses being played havoc with by the rabbits, etc., look again at the plan, and you will see this is guarded against by using board at the bottom. In addition, you could run an extra piece of wire netting round the outside if you wish, but in practice have found no need to do so.

As the ears of the straw are all threshed out, and in thatching are always covered by the next layer of straw (see any thatched building) there has been no trouble with the birds pulling the thatching about.

Placing in an orchard has been found to work well.

A YEAR ON A POULTRY FARM—Continued.

January, October, February, and in the following order for **income** from eggs :—November, December, September, May, August, April, January, June, July, October, March, February.

The income varies to a certain extent, sometimes March being several places higher, but February nearly always occupies its proud position of bottom of the class, with October not very much above it.

The artificial light which is used almost universally on this farm has a good deal to do with the monthly egg cycles, as I shall explain later on.

In the meantime, I think we will close this chapter and hope for better things in the next.

On one farm where this has been done other houses will shortly be erected in their orchards.

In doing so, as open a site as possible should be selected.

Durability I have carefully studied, and at Colesbourne, near Cirencester, Lieut.-Colonel the Hon. F. W. Stanley has a shed thatched with ready-made straw thatch, by unskilled labour. This has been up seven years, and is still good. I can point to others similar, also to straw poultry houses that are lasting to all appearances just as well.

May I be permitted to ask Mr. Richings the name and address of the lady who has the straw house that the birds have pulled to pieces, and I will try to see same, for I feel sure from experience that if the thatching, etc., was carried out as suggested in my article, such would not be the case, and I will try and find out the cause, and if in my power, remedy it.

I shall be pleased to give readers any further particulars if possible.

LANCASHIRE FEDERATION OF UTILITY POULTRY SOCIETIES.

THIRD ANNUAL LAYING COMPETITION, 16th October, 1924, to 16th September, 1925.

Special Notice to Members.—Distribution of Prizes will take place at the Cafe Orient, Friargate, Preston, on Saturday, 12th December at 6.30 p.m., by Mr. F. W. Parton, of Leeds University.

REPORT.

The Federation's Third Annual Laying Competition was held at the Lancashire County Council Farm, Hutton, under the supervision of Mr. C. H. Dobbin, the County Poultry Instructor. In the Large Breeders' Sections there were 81 pens of three birds each, and in the Small Breeders' Sections, for single birds, the entries totalled 53. The competition was divided into six sections, as follows:—

Large Breeders' Sections (Three Birds).—1: White Leghorns, 33 pens; 2: Black Leghorns, 7 pens, and Anconas, 2 pens; 3: White Wyandotte, 22 pens; 4: Rhode Island Reds, 15 pens, and Buff Rocks, 2 pens.

Small Breeders' Sections (Single Birds).—1: White Leghorns, 23 birds; and Black Leghorns, 7 birds; 2, White Wyandottes, 19 birds, and Rhode Island Reds, 4 birds.

The Federation tender their sincere thanks to the Lancashire County Council for the excellent plant they erected for the conducting of the Tests, and particularly Mr. Dobbin for the way he managed the competition. Unfortunately forty-five deaths occurred from various causes, otherwise everything was in good order. The average eggs per bird this year was 157 69 against 138.1 last year, which is very satisfactory.

E. COLLIER, Organising Secretary.
Hoylands Poultry Farm, Ingol, Preston.

COMPETITION RECORDS.—Egg Production and Averages.

Large Breeders' Test.

Section. Breed.	No of Birds in Section	Died.	Total Eggs laid.	Average No. of Eggs per Bird	Highest Individual Bird in Section.
1.—WHITE LEGHORNS	99	10	17046	172.4	256
2.—BLACK LEGHORNS	21	3	3096	147.4	245
ANCONAS	6	—	882	147	180
3.—WHITE WYANDOTTES ...	66	18	9493	143.8	230
4.—RHODE ISLAND REDS ...	45	7	6877	152.8	252
BUFF ROCKS	6	—	909	151.5	184

Small Breeders' Test.

Section. Breed.	No of Birds in Section	Died.	Total Eggs laid.	Average No. of Eggs per Bird	Highest Individual Bird in Section.
1.—WHITE LEGHORNS	23	3	3860	167.8	230
BLACK LEGHORNS	7	1	1263	180.4	214
2.—WHITE WYANDOTTES ...	19	3	2665	140.3	220
RHODE ISLAND REDS ...	4	—	585	146 3	217
Total	296	45	46676	157.69	

AWARDS.

Large Breeders' Sections.—Silver Challenge Cup for Best Pen: Mr R Beesley, West Moss Farm, Ballam, Lytham. Gold Medal for Best Pen in Section 1: Mr. R. Beesley, West Moss Farm, Ballam, Lytham. Silver Medal for Second Pen in Section 1: Mr. J Booth, Alt Hill Farm, Parkbridge, Ashton-under-Lyne. Bronze Medal for Third Pen in Section 1: Mr. A. C. Harrison, Willow Bank, Colne. Gold Medal for Best Pen in Section 2: Mr. O. Rawlinson, Burley Grange P.F., Egg Bridge, Waverton. Silver Medal for Second Pen in Section 2: Mrs. J. H. Hill, The Green, Poulton-le-Flyde; Bronze Medal for Third Pen in Section 2: Mr. F. Lord,

(Continued at Foot of Next Column).

Correspondence.

WHY ONE COMMERCIAL EGG FARMER RUN
WHITE LEGHORNS.

To the Editor of "Eggs."

Dear Sir,—In view of Mr. Appleton's Rhode Islar Red records, the following White Leghorn figures ma be of interest. The pullets were hatched in abo equal number on March 4th, 29th, and April 21st; 3 pullets were divided into two flocks of 100 and 25 They were in no way selected, and, with the exce tion of 20, which were sold, were the whole of t pullets reared in 1924. I do not trap-nest, so I ca not give individual scores, but the flock figures we as follows:—100 pullets from September 1st, 1924, August 30th, 1925, laid 19,414 eggs, and the 250 pu lets during the same period 47,656, giving an avera for the 12 months of 191 eggs per bird. They la 1,204 eggs previous to 1st September, 1924. M Appleton's figures appear to cover 13 montl namely, from September 1st, 1924, to Septemb 30th, 1925. During that period my own 350 pulle laid 700,061 eggs, making an average of 200 eg Mr. Appleton's figures, worked out in the same wa show 195 eggs per bird for the 140 birds whi excludes those which died. Of my own 350 pullets died or were killed during the 12 months, and August 20th, 1925, 65 were sold to make room growing birds. Had I been able to have adjusted t by trap-nesting, as Mr. Appleton has done, my avera would appear even better.

My monthly figures for a nominal flock of 600 bir (hens and pullets) are:—

1924.		1925.		1925.	
Sept.:	6,480.	Jan.:	8,980	May	11,69
Oct.:	5.409,	Feb.:	9,737	June	10,03
Nov.:	5.431	Mar.:	12,379	July	8,88
Dec.	7,173	Apl.:	12,309	Aug.:	8,93

which shows quite a good proportion of winter eg My figures for this September and October are ev better, namely, 8,769 and 6,822 respectively.

Yours faithfully,
T. G. HEATON

6, Pleasant View, Stubley Mill Road, Littleboro'. Gold Medal Best Pen in Section 3: Mr. C. Bates, Firwood Farm, Samleesb Silver Medal for Second Pen in Section 3: Mr. W. Hammett, My Poultry Farm, Blackpool. Bronze Medal for Third Pen in Sect 3: Mrs. S. Sefton, Lower College, Balderstone. Gold Medal Best Pen in Section 4: Mr. F. Harvey, Bond Villa, Brother Silver Medal for Second Pen in Section 4: Messrs. W. Wear and Sons, Old Hall Farm, Heskin, Chorley. Bronze Medal Third Pen in Section 4: Mr. T. Edmondson, Weasel Poultry Fa Tockholes, Darwen.

Small Breeders' Sections.—Silver Challenge Cup for Best B Mr. J. W. Pearson, The Elms, Poulton-le-Flyde. Gold Medal Best Bird in Section 1: Mr G. A. Wolstenholme, 110, Blackl Street, Bolton. Silver Medal for Second Bird in Section 1: H. West, 48, Pole Lane, Darwen. Bronze Medal for Third in Section 1: Mr R. Mills, 16, Harold Street, Small Bridge, R dale. Gold Medal for Best Bird in Section 2: Mr. J. W. Pear The Elms, Poulton-le-Flyde. Silver Medal for Second Bir Section 2: Mr. D. Braithwaite, Claremont, Poulton-le-Fl Bronze Medal for Third Bird in Section 2: Mr T. Plumb, Mo Pleasant, Antrobus, Northwich.

STRAW HOUSES.

To the Editor of "Eggs."

Dear Sir,—Re correspondence on Straw Houses, I have several on my own farm which I shall be pleased to show anyone at any time.

I used wooden houses for ten years, and, in my opinion, the straw houses have proved themselves much superior, considering **all** points—cheaper to build and **much more comfortable** for the birds being warmer in winter and cooler in summer.

Repairs are practically nil. They are easy to keep clean, to spray, or disinfect; give a better ventilation than wooden houses, and stock keeps exceptionally healthy in them.

The layers put up splendid records, particularly for the winter months.

A neighbouring farmer also uses them with equal success. I have had a large number of poultry breeders visit my farm, also several officials, but not one has been able to find any fault with the stock kept in them, and a good many breeders who came fully prepared to condemn them, went home and built similar houses.

I have also a brooder house built on the same principle, which I find comfortable to work in; trimming of lamps, etc., and gives protection for the chicks.

Last season Mrs. Pearce Ellis, Maisemore Court, near Gloucester, used one of these brooder houses and reared nearly 1,000 pullets, and I believe I am correct in saying that it was one of the most successful seasons she has had.

May I again extend a hearty invitation to any of your readers who would care to see them.

Yours faithfully,
A. RUGMAN.

MILK POWDER.

To the Editor of "Eggs."

Dear Sir,—I have been an interested reader of Lt.-Col. Macrory's article, and I wish to make a few remarks on his statement in "Eggs," dated 1th November, that Milk Powder at £40 per ton s at an extortionate figure, and that he has found a very efficient substitute in Semi-Solid Buttermilk.

First of all, it must be borne in mind that the dried milk available for poultry feeding is milk powder manufactured for human consumption, but which has gone slightly off quality and unfit for uman use.

Consequently it has to be realised for whatever rice it will command, and even at the present gure the manufacturer is losing money on it. Can you blame him cutting that loss as much as ossible?

In my opinion, milk powder at £40 per ton can still be economically used both for chick rearing and egg production. Bulletin No. 258, issued by the Purdue University Experiment Station, gives valuable figures of results obtained in feeding experiments with laying pullets. I do not intend repeating them all here, but the results were in every case favourable to the use of milk powder as against liquid buttermilk or no milk at all. It is sufficient to say that the feeding value of liquid buttermilk was five dollars per 100 lbs., and the dried milk 55 dollars, 10 cents per 100 lbs.

As regards the semi-solid buttermilk, the sale of which is now being pushed in the country, might I point out that many people have been lulled to sleep by the sauve talk of the seller of this article.

The feeding value of buttermilk depends entirely on the milk solids—the water is pure waste. Condensed (Semi-Solid) Buttermilk contains 70 per cent. water and 30 per cent. milk solids against 7.5 water and 92.5 per cent. milk solids in the case of Dried Buttermilk. One pound of the latter is equal in feeding value to 3 3/10th lbs. of Semi-Solid Buttermilk. Might I pertinently ask, "Why pay for water when you can get as much as you want at the nearest tap?"

Poultry-keepers are out to work their industry on the most economical lines possible, but it would be a pity, as Lt.-Col. Macrory will readily agree, if they were unwittingly to give an exaggerated value to any feeding stuff or source of animal protein.

Yours faithfully,
W. A. CAMPBELL.

ROUP.

To the Editor of "Eggs."

Sir,—I am rather amused at the letter of Mr. F. Cockerill in the issue of "Eggs" of November 18th. As he said, the resolution of the Liverpool and District Branch suggesting the Ministry of Agriculture scheduling roup had **"No seconders."** **Why?** Because roup is found in one manner or other on 90 per cent. of the large poultry farms. A secret. Well, yes! Who would buy of the breeder with roup on his farm? Where would the 5-10 guineas for the stock birds off the 300(?) egg strains go to? Why, to the breeder who can certify that his stock is free, and has been free from roup for years. The answer to **no seconders** is, **"Man, mind thyself."**

Mr. Cockerill mentions village. Does he think Liverpool, the second city in the British Empire, a **village?** Oh, what a fortune would be made by the "advisory fancier" of long experience if he had to treat all the sick birds in Liverpool at 2s. 6d. a visit. I should like the job myself. I could see a Rolls-Royce in no time, and poor "shank's pony" put out to grass. Why, I am sure if he visited the poultry(?) market here he would see more **stumers** in one day than he has seen in all his experience as a poultry fancier.

No, Mr. Cockerill, and all the members attending the general meeting do not see the point of the resolution scheduling roup.

I quite agree with him that good management, observation and strong stock will keep all disease under, but what about his neighbour, who doesn't take the trouble to manage and observe, and will not do anything to obviate any disease, and who will empty his disease ridden excreta, where mice and wild birds can carry the germs of roup to his (Mr. Cockerill's) poultry establishment? What did you say—sue him for the value of any poultry dying from roup, caused by his insanitary way of disposing of his disease-ridden excreta? "Oh, what a hope." You have no remedy against your neighbour. There is not enough cash in the Bank of England to pay the lawyers their fee and refreshers to beat him on the case.

What is the remedy? **Schedule.**—(1) To protect the man who manages well and observes, and keeps his stock free from disease; (2) to protect the "gull" who buys the disease-ridden poultry from the markets; (3) to prevent roup-infected birds being sent from poultry farms and establishments to be sold in the markets.

Will you say what about compensation if Ministry of Agriculture schedules roup? I don't think the compensation business will be very expensive, because compensation would be based on weight of birds only. Birds cured of roup are no use as breeders, and also are poor egg producers when cured. This cuts out the big prices, which would be wanted by breeders for stock birds which had the roup.

Now, what would you do with the carcases of the dead birds? Why, appoint Lieut.-Col. J. Macrory, D.S.O. (as he has great experience with the shillingsworth of paraffin), as chief advisor and burn them.

Mr. Cockerill advises to breed from **moderately-bred stock,** as high producers have not the resistant powers as the moderately-bred stock.

Isn't his advice against the principles of the S.P.B.A. teaching, and wouldn't it lead most of our commercial egg farmers into the bankruptcy court if they followed his advice?

The **high producer** every time, with fine tight feather and good head and bright eye, and then we shall have the **British egg for the Britisher.**

Yours truly, DICKY-SAM.

Bees.

By E. W. D. MADOC.

THE PREPARATION OF HONEY FOR MARKET.—(II.)

Extracted honey requires rather more preparation than comb honey before it is ready to sell, but it has the advantages of keeping in perfect condition for an unlimited period and of being comparatively easily packed in such a way as to ensure safe arrival at its destination.

The honey should not be removed from the hives until it is well ripened—that is to say, until the original watery nectar collected by the bees has been reduced by evaporation to the consistency of good thick honey. As a general guide it may be stated that when the combs are more than two-thirds capped over, the money will be sufficiently thick in nine cases out of ten. Unripe honey is thin and watery, of poor flavour, and generally ferments within a few weeks of extracting.

After extracting, the honey should be strained through a cheese cloth or muslin and allowed to stand for two or three days in a large vessel with a honey tap at the bottom. After a few days any thin unripe honey that may be present will rise to the top, and the heavy ripe honey may then be drawn off from the bottom into the receptacles in which it is to be sold, and the last few pounds of thin honey put apart for immediate consumption or fed back to the bees. Suitable tanks complete with taps will be found listed in any bee appliance manufacturer's catalogue under the name of "Honey-ripeners."

If the honey is bottled or tinned immediately after extracting and straining, the unripe honey, if present, will be found later at the top of every jar or tin. Fermentation will probably take place within a short time, and your customer's first purchase is likely to be his last.

Honey is generally sold in half-pound and one-pound glass jars with screws caps, or in seven or twenty-eight pound lever lid tins made for the purpose. The tins should be packed in strong wooden boxes or crates in such a way that the lid of the tin be firmly held in place, otherwise leakage is frequent through the lids coming off, improbable though it may seem.

Bottles of honey should be packed in strong wooden boxes with a layer of straw at the bottom, top and sides of the box and between the bottles so that each jar is surrounded by a cushion o straw. Properly packed in this manner they wil stand any amount of rough handling withou damage.

(Continued at Foot of Previous Column).

Incidentally the rates on extracted honey by goods train are the same whether sent at company's or owner's risk. Comb honey is only accepted at owner's risk rate by goods train, but can be sent at company's risk by passenger train at about three times the cost of sending by goods at owner's risk.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

LIVERPOOL AND DISTRICT BRANCH.

The November Monthly Lecture and Egg Show was held on Saturday, November 14th, 1925, at the headquarters of the branch, "The Albany Room," Palatine Cafe," Lord Street, Liverpool, at 7 p.m., when Mr. Jack Wrennall gave an interesting lecture on "Selecting the Breeders." The following were the winners in the Egg Show:—1st, White, Mr. Robert Thomas. 1st, Brown, Mr. Isaac Mundy; 2nd, Mr. Wm. Burns. 1st and 2nd, Tinted, Mr. Rd. Handley. Judge: Mr. Jack Wrennall.

The Egg Show was poorly supported, which no doubt was caused by the cold weather experienced the days previous to the show.

LECTURES BOOKED.

Saturday evening, 12th December, 1925 (Egg Show).—Lecturer: Mr. Tom Newman. Subject: "The Intensive System." Lecturer: Mr. E. J. Meekings. Subject: "What are the Prospects of Commercial Egg Farming?"

Saturday evening, 9th January, 1926 (Egg Show).—Lecturer Mr. Frank Snowden, Cowling. Subject: "The General Routine of a Pedigree Poultry Farm."

Saturday evening, 13th February, 1926 (Egg Show).—Lecturer: Professor Williard C. Thompson, Director, National Poultry Institute. Subject: "What the National Poultry Institute is Doing."

Saturday evening, 13th March, 1926.—Lecturer: To be fixed.

All members of the S.P.B.A who are not members of the Liverpool Branch are cordially invited to the above lectures. Any ntending new members of the Liverpool Branch can have full articulars of the branch from the hon. secretary, R. J. Thomas, Grey Road, Walton, Liverpool.

SIXTH MIDLAND POULTRY FESTIVAL.

Schedule and entry form describing whole details of the Show lassification for the above Midland event, which is due to ake place in Bingley Hall, Birmingham, January 7th, 8th, and th, 1926, are now ready, and can be had from the secretary's ffice, 63, Old Meeting Street, West Bromwich.

Again, as in previous years, the "Birmingham Mail" are o-operating with the Midland Federation of Feather and Fur ocieties in organising this poultry festival, which is designed appeal to all classes of poultry-keepers, and to be somewhat ifferent from the average Poultry, Pigeon and Rabbit Show.

There are numerous variations of interesting detail appertaing to this exhibition, the whole idea being not only to attract e poultry-keeper, but the man in the street, who keeps a w hens and who has never previously taken sufficient interest make him feel a visit to a poultry show worth while.

Another special feature this year will be the Poultry-keepers' mpetition for the Best-Kept Pen of Fowls, and a special assification for inventions, separate sections being detailed to ter for the enterprising and skilful poultryman's ideas.

The usual many Silver Challenge Cups and Specials will be varded in addition to nearly £600 in prize money.

Forty-two individual classes cater for the utility side, while nety-seven classes appeal to the exhibition fancier.

Water Fowls, Pigeons and Rabbits are also extensively tered for, and it is to be expected that another record for this idland event will easily be established.

The Birmingham civic authorities are shewing considerable erest in the work, and the fact that the Lord Mayor of rmingham, Alderman Bower, J.P., has agreed to open the tival on the first day expresses very fully the satisfaction t is being felt in Birmingham for the Midland Poultry stival.

Poultry breeders displays will cater for those breeders who h to exhibit specimen eggs for hatching, chicks and stock, l get into direct touch with the many thousands of small ltry-keepers who will attend to make their annual selection l purchases for the forthcoming season.

BRITISH BLACK BARNEVELDER CLUB.

The Club Show was held at Tottenham on November 9th and 10th, and the entries in the two classes, viz., 19 males and 24 females, show that members are keen, and that progress is being made, for it must be remembered that the club is not yet twelve months old. But numerous entries without "quality" would be of little use. There is, however, no doubt that the "quality" of the exhibits was exceedingly good and the birds were of true Barnevelder type, and it would be difficult for any Barnevelder enthusiast to "fault" the winners. The dull black colouring which has sometimes been seen was conspicuous by its absence, and was replaced by the rich, deep black with a bright sheen, which is what is wanted. There was an immense improvement in the males as regard type, colour, and texture, especially in their combs. The good clean yellow legs of the pullet was noticeable.

As a "souvenir" of the first Club Show the winners were presented with neat rosettes in the club colours (black and orange), embroidered in gold.

The Club Cups were won by Mrs. J. M. Walker, who showed an active well-balanced cockerel with a good eye and texture, and by Mr. E. F. Piper, whose hen had grand shape, colour and sheen, with a nice head and eye, and good coloured legs.

Several non-members of the club exhibited, and the first place for males was secured by Mr. Slocock with a fine bird of good type and colours.

The variety is certainly making progress, and we hope to welcome several new members shortly. Mr. Powell-Owen judged the classes, and I think I may say found an array of quality among the "Blacks" which came as a surprise to him—expert and experienced as he is.

The club is guaranteeing classes at Bethnal Green in December, and at Barking and Birmingham (The Midland Federation Show) in January. Will members kindly note this, and it is hoped support these shows as well.

The first Annual General Meeting of the Club was held during the Dairy Show on October 21st, and there was a good attendance of members, who, by their questions and suggestions, showed how "live" their interest is, and all were confident as to the splendid future there is in store for their handsome variety of Barnevelder. The hon. secretary reported on the progress of the club, and, in order to assist members in getting stock, asked those who has surplus birds to let him know so that he might inform members who wanted to purchase. He paid a tribute also to the kind way in which the poultry press and the "Field" had reviewed the club's first booklet, and to the friendly criticism of the Black by various experts.

The hon. treasurer presented a very satisfactory statement of the club's finances.

A Committee Meeting was held before the Annual Meeting and four members were elected. It was decided, for the purposes of subscription, that the Channel Islands and Ireland should count as "Overseas." Mr. T. C. Parkinson was elected to judge the classes at one of the forthcoming shows.

HERTS COUNTY EGG LAYING TRIALS.

Report for First Period—15th October to 11th November, 1925.

Section 1. Open to any Breeders in the County.

Figures are Eggs and Points respectively.

Division A. Any Light Breed. Six Pullets.—Mr. Hedley Morgan (W.L.), 119, 1068; Mrs. E. Charles (W.L.), 104, 919; The Hoo Poultry Farm (W.L.), 74, 733.

Division B. Any Heavy Breed. Six Pullets.—Dr. W Douglass (W.W.), 116, 1157; Mr. J. P. Morgan (W.W.), 82, 789; Miss Harrison Bell (Buff Rock), 74, 738.

Section 2. Open to Poultry-Keepers whose total stock of laying birds does not exceed 150 head.

Division A. Any Light Breed. Three Pullets.—Dr. W. Douglass (W.L.), 49, 460; Mr J. Burnett (B.L.), 18, 165.

Division B. Any Heavy Breed. Three Pullets.—Mr. W. Lloyd (W.W.), 55, 492; Mr N. Flower (R.I.R.), 39, 290.

Score Points are allotted as follows:—Eggs 2ozs. and over, 11 points; eggs 1⅞ozs. to 2ozs., 10 points; eggs 1⅝ozs. to 1⅞ozs., 8 points.

Herts Institute of Agriculture,
"Oaklands," near St. Albans.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

THE PRICE OF EGGS.

One of our members recently wrote me from Cornwall with reference to the price he was receiving for his eggs. I did not consider this satisfactory, and gave him the name of another firm. He writes this morning to say:—

> "I am very much obliged for your letter of the 16th inst., and should not have troubled you with another letter, but I think you might be interested to hear the result of your recommendation. On the 18th I sent one box of 20 dozen eggs to Mr. A., and at the same time another box to Mr. B. The eggs were not specially selected, and, in so far as I know, the two consignments were identical in every way. Mr. A. returned me 34s. per 120 for the lot, while Mr. B. credited me with 16 dozen at 32s. and four dozen at 26s. The difference is considerable."

I think this shows the importance of the producer looking round for his markets, and in many cases he evidently does not pay sufficient attention to this part of the business.

I am not often in a position to answer enquiries as to where a suitable market can be found, more particularly when these enquiries roll in in the spring, when the glut is such that merchants hardly know how to dispose of their eggs.

I may say that the two firms mentioned above are both in London.

FOOD PURCHASE SYSTEM.

It is quite understood that with one or two exceptions all the goods supplied under this scheme are F.O.R. (free on rail), and not Carriage Paid. Many members have written to ask the approximate cost of carriage. I am not in a position to give this definitely, but the following may be a useful guide:—

1 cwt. lots, 25 miles	1s. 3d.
1 cwt. lots, 50 miles	1s. 6d.
1 cwt. lots, 100 miles	1s. 9d.
5 cwt. lots, 25 miles	0s. 10d.
5 cwt. lots, 50 miles	1s. 3d.
5 cwt. lots, 100 miles	1s. 4d.

Members must please take this as being only approximate, but it will serve as a guide when they are purchasing goods.

Will they please definitely understand that not less than five cwt. lots can be purchased through the Food Purchase Scheme.

In spite of all that has been said, we have so many orders for one cwt. lots. Later on we may be able to manage this, but at present we have not been able to arrange it.

Prices are up a little this week, more particularl maize and its by-products and millers' offals.

Again I would remind members that all price quoted are SUBJECT TO MARKET FLUCTUATIONS.

The Scheme is progressing at a pace which must confess is rather astonishing, and the tonnage we are selling increases, not only every week but every day.

I regret to say that we have had this week t strike another firm off the list for supplying good not up to the sample or standard which the covenanted to do. All these matters are boun to occur in the early stages of such a scheme, bu each day sees it becoming more useful, and man of the larger firms are now realising its possibilit and the necessity of buying only foodstuffs of th first quality.

We shall have our trouble, but we must not b turned from our path by some of the obstacle which we may find in the way, and many of whic will no doubt be placed there.

PRICES OF MASHES, ETC.

The following meals can be supplied in 5 cw lots and upwards of one kind free on rail:—

Fish Meal (Pure White)	**19/9**	**F.O.R.**	**London.**
,, ,, ,, ,,	**19/0**	**F.O.R.**	**Swansea.**
,, ,, ,, ,,	**19/3**	**F.O.R.**	**Tynemouth.**
,, ,, ,, ,,	**19/9**	**F.O.R.**	**Grimsby.**

PRICES OF MASHES. Per Cwt.

	Layers.	Growers.	Breede
F.O.R. LIVERPOOL	**11/9**	**11/9**	**12/3**
F O R. LIVERPOOL	**12/3**	**12/3**	**13/9**
F.O.R LONDON	**11/6**	**11/6**	**12/0**
F.O.R. LEITH	**10/9**	**10/6**	**11/9**
F.O.R. LEICESTER	**11/0**	**11/0**	**11/9**
F.O.R. GREENOCK	**12/0**	**12/0**	**13/3**
F.O R. KING'S LYNN ...	**11/6**	**11/6**	**11/9**
F.O.R. BELFAST	**12/9**	**12/6**	**12/9**
F.O.R. BRISTOL	**12/0**	**12/0**	**13/0**
F.O.R. SOUTHAMPTON ...	**11/6**	**12/0**	**12/0**
F.O.R PLYMOUTH	**12/6**	**12/9**	**12/6**
F.O.R. ABERDEEN	**12/3**	**11/9**	**13/9**
F.O.R. HARROGATE ...	**12/9**	**12/6**	**13/6**
F.O R. GLASGOW	**12/9**	**12/9**	
F.O.R. STAFFS	**11/9**	**11/9**	**13/0**

Sussex Ground Oats F.O.R.	**London:**	**12/6**	**per cwt.**
,, ,, ,, **F.O.R.**	**Sussex:**	**12/9**	**per cwt.**
,, ,, ,, **F.O.R.**	**Bristol:**	**13/0**	**per cwt.**

WANTED.

Mr. E. Ball, of Mockbeggar, Biddenden, Ke writes:—

> "A reader of 'Eggs' having seen announcement under 'Forthcoming Event that I am migrating in February, has sent a telegraph money order for £8 from Bolt for certain goods, **but omitted to give his na and address.**
>
> Please spare a small space in your paper notify him that his money will be returned him (the goods being sold previously), wh I know to whom to send it."

APPLICATIONS FOR MEMBERSHIP.

Kent, G. H., Little Bromley, Nr. Manningtree, Essex.
Hart, H. A., 76, Northern Road, Plaistow, E.13.
Stern, G. H. F., The Highlands, Symonds Yat, Hereford.
Symonds, W. R. P., Daff-y-Naut, Whitchurch, Nr. Ross-on-Wye, Hereford.
Murray, Major P. M., Blacjmore Cottage, Hanley Swan, Worcs.
Gilley, J. K., Langaller Farm, Fetcham, Surrey.
Btookes-Smith, Mrs., Brook Meadow, The Holmwood, Surrey.
Heppenstall, T. H., The Poplars, New Barn, Longfield, Kent.
Adams, Mrs. A. G., "Wee Cott," Queens Park Gardens, Seaford.
Morris, E. H., Park Hall, Great Bardfield, Braintree.
McFarlane, J., Bride Hall, Ayot St. Lawrence, Welwyn, Herts.
Philips, H., Staplehurst, Darsham, Nr. Saxmundham, Suffolk.
Richards, H., Hafod Garregog, Cluut-y-Bont, Nr. Carnarvon, N. Wales.
Wallis, Chapman O., Ferncliffe, St. Catherines, Lincoln.
Darnell, E., Lodge Farm, King's Newton, Nr. Derby.
Suffern, Miss E. M., Tau Hara, Tiptree, Essex.
Brown, S., 27, Oxford Street, Grantham.
Hammond, P. C., Government House, Bermuda.
Hodkinson, T., 21, Withins Terrace, Radcliffe, Manchester.
Andrew, T., Kincaidfield House, Milton of Campsie, Stirlingshire.
Holt, H., Brookside P.F., Lower Hey, Rochdale.
Oakes, A., 142, Dorrington Road, Lancaster.
Coultrip, A. W., Norwood Manor, Eastchurch, Sheerness.
Jackson, D., Fengate, Moulton Chapel, Spalding, Lincs.
Wild, I., Whitley Bridge, Nr Goole, Yorks.
Barr, D., 104, Hermon Hill, South Woodford, London, E.18.
Lockyer, A., Lee Manor Farm, Romsey, Hants.
Guyer, H. C., Dera Ismail Khan, N.W.F.P., India.
Colledge, Mrs. A., Red Lane, Kenilworth, Warwickshire.
Wright, T., 154, Marshside Road, Marshside, Southport.
Lachlan, G. Mc L., 207, Clarkston Road, Cathcart, Glasgow.
Passey, H., 119, Unett Street, Smethwick.
Quarterman, W. C., Little Bursted Farm, Upper Hardres, Nr. Canterbury, Kent.
Gibson, T. J., The Bungalow, South Street, Guisborough, Yorks.
Paulson, Mrs. M. M., The Woodland, Knockholt.
Wilcox, Mrs., Holmwood House, Minsterley, Salop.
Crook, R. J., The Green, Erchfont, Nr. Devizes, Wilts.
Wattam, A. H., Benniworth, Nr. Lincoln.
Ardern, L., The Hollins, Mansergh, Kirkby Lonsdale, Westmorland.
Archibald, G. A., Shirley Lodge, Lancaster Road, Nr. Norwood, S.E.27.
Birt, Miss W., The Gardens, Christian Malford, Wilts.
Kemp, J. B., Watling House, Knutsford Road, Bowdon, Cheshire
Farquhar, Mrs. L., Marchlands, Tyrie, Fraserburgh.
Willis, E., 29, Stuart Street, Treochy, Rhondda, S. Wales.
Minnis, J., 300, Woodstock Road, Belfast.
Fancy, Mrs., Fenceside P.F., Kilmaurs.
Tronsdale, Maj. E. H., Durrents Close, St. Michaels, Tenterden.
Verran, Mrs. G., "Boturnell," St. Pinnock, Doublebois, Cornwall.
Liddon, J. H., West Monkton, Taunton.
Cavanagh, J., "Glenwood," Nathans Lane, Highwood, Nr. Chelmsford, Essex.
Porter, I. C., "Fyfield," Marlborough, Wilts.
Woon, Mrs. H. C., Lodge Farm, Dane End, Nr. Ware, Herts.
Maclay, W. P. (Junr.), Glenwood P.F., Balfron, Stirlingshire.
Egleton, Pay-Com., H., The Firs, Chislehurst Road, Mottingham, Kent.
Russell, A., 24, Arthur Road, Southampton.
Rees, Mrs. R., New House Farm, Peterstone-Wentloog, Nr Cardiff.
Studdert, Mrs. G. E., Cragmoher, Corofin, Co. Clare.
Dugdale, W., Higher Chapel Hill Farm, Rawtenstall, Nr. Manchester.
Field, C., Springfield, 504, Hagley Road, Quinton, Birmingham.
Pearson, I. E., West Street, Alford Town, Lincs.
Hill, G., "Sunnyside," Lime Grove, Draycott, Derby.
Pawling, A., Lyne P.F., Lyne, Chertsey.
Bradshaw, Miss B. H., Manor House, Reighton, Speeton, E. Yorks.
Avise, T., Wood P.F., Blackboys, Sussex.
Cockrill, K. A., Hillcroft, Burgh Castle, Gt. Yarmouth.
Ford, Miss E. D., Polhampton Cottage, Overton, Hants.
Macdonald, H. L., "Balmoral," Jenner Road, Barry, Glam.
Mann, T., 24, Windsor Road, Barry, Glam.
White, A., "Hadleigh," Portugal Road, Woking.
Pratt, J. H., Wyre Forest P.F., Rock, Kidderminster.
Bell, Mrs. Harrison, Brocklesby, Chandlers, Ford, Hants.
Soule, A., "Hill Crest," Tiptree, Essex.
Read, Miss Moutray, Gate House, Wadhurst.
Wright, S., New Street, Morton, Alfreton, Derbyshire.
Polley, G., "The Bounds," Ardleigh, Essex.
Bubbings, W., 14, Brook Street, Rishton.

WADHURST BRANCH.

On Saturday, November 21st, the branch had the pleasure of a visit from the President of the Association, Mrs. Charles Hunter. On arrival at Wadhurst Mrs. Hunter inspected the "laying trials," which commenced on October 15th, on the farm of Messrs. Luff and Bennett. The birds were found to be in excellent condition, and several are putting up very creditable scores.

During the afternoon a meeting was held, the Branch President, Dr. J. L. Rosedale, being in the chair. Mrs. Hunter gave a most interesting lecture on "The Intensive System," dealing in detail with the whole of the routine—housing, feeding, breeding, rearing, and general management of the flock. Mrs. Hunter illustrated her remarks with some excellent photographs taken at her own farm.

A hearty vote of thanks was given to Mrs. Hunter for her kindness in visiting the branch, and for her extremely helpful address.

The Chairman announced that at the next meeting, on December 11th, there would be a show of Rabbits, Table Poultry and Eggs, to be followed by a lantern lecture by Mr. H. G. Billingshurst, F.L.S., lecturer in Biology at King's College, London, on "Which Came First, the Hen or the Egg?"

At the close of the meeting tea was very kindly provided by Mrs. Tudor.

CORRECTION:

We have been asked to correct a mistake which appeared in the advertisement of Mr. Warwick Rogers, in last week's issue.

The score of his five Wyandottes was given as 1,138 eggs. This was incorrect, and the total should have been 1,381 eggs.

OUR FRONT COVER.

Mr. Golden, the owner of the Light Sussex hen which appears on our front cover, has won fame as a breeder of R.I. Reds, and he still holds the record for a pen of ten birds of any breed in the Laying Test, his Reds laying 2,229 eggs, with a total weight of 4,722 ozs.

The Light Sussex depicted on the front cover laid 255 eggs in 48 weeks.

Some years ago the Sussex were compared to barn-door fowls, or rather the comparison was with the Orpington, and the Sussex were said to come from the Lodge, while the Orpington's address was the Mansion. What a change of affairs! The Orpington at the present time occupies a very humble position, while the Sussex is the most popular breed in the country, and its popularity is increasing by leaps and bounds. One hopes it will not be bred to such an extent for egg production as to lose its other economic qualities. We can trust Mr. Golden in this respect. He will not forget it is a dual-purpose bird, and a breeder of his reputation is likely to preserve the breed characteristics.

One of these days we may see him winning a test with Light Sussex with an equal record to the ten R.I. Reds.

Answers to Queries.

Continued.

G. R. (Peterborough) sends me a formula of a mash which he says has been given him by a friend, and is a combination laying and breeding mash. It would make a good breeding mash, as it contains all the essentials for the building up of a sturdy chick. As a layers' mash, however, I would prefer to see the maize meal raised to six parts and the ground oats reduced to six. "G.R." says he saw stated recently in a well-known poultry paper that "the continued use of dry mash eventually leads to lack of size in the flock." He personally fails to see this. Of course such statement is absolutely nonsense, and if the writer had been a breeder of poultry he would in all probability not have made it. He would, perhaps, understand that the size of a bird is determined by its inheritance. There may be many factors which may prevent its reaching this size—undernourishment for one, early production for another—but a bird is not undernourished which is fed on dry mash, provided it is well mixed and the constituents are of good quality. If the person who wrote this were to make a few enquiries on the commercial egg farms in this country, and ask whether they find that the size of bird is diminished as a result of dry mash feeding over many years, he would probably alter his views in the matter. "G.R." has a R.I. Red hen in her third year of good pedigree and breed characteristics, and retains good colour. She has never been broody, and, in his opinion, is a good Red. He wishes to know whether I would advise him to mate her to a R.I. Red cock in his second year, or obtain a cockerel from another source. He asks me whether the mating would tend to breed good pullets. That I could not answer, but there is no objection to mating a good bird in his second year to a hen which has retained her colour in her third year, and, as far as I know, there is no reason why they should not breed good pullets, but not having seen the birds I cannot express a definite opinion.

E. A. E. (Hitchin) writes that he had one pullet die last week—he thinks from liver trouble. It died in about a week after his first noticing anything wrong with her. He also lost one last winter under similar circumstances, and he wishes to know whether he is feeding wrongly. I do not think this is the case. So many people jump to that opinion if they lose a bird, but it must be remembered it is impossible to feed a mash which would not upset the digestive organs of one bird in the flock. Now, "E.A.E." has only lost one bird this year and one last, and he begins to think that his feeding is at fault. There is nothing in it to which I can trace the loss of these birds. He frequently gives glauber salts in the water, and he is now giving them some powder once a week in the mash instead. He would be wise if he did not frequently give glauber salts in the water, and not give quack remedies to healthy stock, but wait until there is sickness before he begins dosing his birds. The formula for which he asks is:—1 lb. bran, 1 alfalfa meal, 4 middlings, 1 Sussex ground oats, 1 maize meal, and one meat and bone meal. If there is plenty of fresh green food he might replace the alfalfa meal with another part bran.

Death of Mr. P. L. JOHNSON.

Our readers, and particularly those who are members of the S.P.B.A., will learn with deep regret of the death of Mr. P. L. Johnson, which occurred at his residence, Northgate, Bishop's Stortford, on Wednesday, November 25th. In the autumn of 1924 Mr. Johnson met with a serious accident, and his health since then has been a cause of great anxiety to his friends, but the news of his death came as a painful shock to those of us who met him at Harrogate in the summer.

Mr. Johnson was one of the founders of the S.P.B.A., and for three years he occupied the presidential chair. No man contributed more to the success of the Association. From the first he gave it his enthusiastic support, and in the early days, when the struggle was hardest, and we were fighting against many difficulties to establish "Eggs," he was ever ready with encouragement, advice and assistance.

During the years of his presidency the S.P.B.A. made astonishing progress. He made no secret of his pride in the Association, which had achieved such wonderful success in so short a time. As president he was an unqualified success, his kindliness and tact earned him the affectionate regard of his colleagues, while his practical experience and knowledge rendered him invaluable as a counsellor.

Although poultry-keeping with him was but a hobby, he made a wonderful success of it. What he achieved on the small area of land at his disposal (rather less than an acre) has probably never been surpassed if it has been equalled in this country. His methods he described on more than one occasion in these columns, and the articles aroused the greatest interest.

All of us who were associated with him in the work will hold his memory in affectionate regard and respect. Our readers will join us in expressing the deepest sympathy with Mrs. Johnson and his family.

The "All-Purpose" System of Brooding and Rearing.

By **MAJOR W. HAYLAND WILSON.**

(Copyright.)

This "All-Purpose" system, as I have dubbed it, naming it after the type of housing I use, breaks fresh ground, I fancy, in that I not only brood and rear in the same house, but even go so far as to run on my pullets over their first winter laying season in the same houses, shifting them only in the following February, choosing a fine quiet spell of weather as far as possible, and I find that the change over at that time of year checks them not at all.

I am not going to say that, if they were handled roughly, grabbed by one wing and a leg, say, and rammed into baskets one on top of the other two deep (as I have seen birds handled!), that it wouldn't check them—I think it would!

But I try and get my birds used to handling—and incidentally I look upon this question of gentle handling and all that the term conveys as one of the sometimes rather neglected secrets of success.

To run this "All-Purpose" system successfully entails, of course, the best of housing and, above all, scrupulous cleanliness, both as regards the housing and the runs; but, then, these two considerations should surely be taken for granted in running any system of poultry farming on modern lines these days.

I start with a 60 ft. house, span roofed, ventilated at eaves, and well lit both back and front. The system of eave ventilation I can control by hinged strips as requisite. My 60 ft. house is partitioned off into three twenties, each partition with a doorway in centre boarded up to eighteen inches with three removable 6 in. boards that can be dropped into slots formed by two strips tacked to each post, wire door above. The topmost two feet of partition is left unboarded, but wired. Over this wiring, both of doors and partitions, I stretch in the early days, curtains of hessian, ringed at intervals of a foot and hitched on small cup-hooks, that I may control further the inside ventilation and temperature.

My two end twenties are again partitioned off with boards (the height of a foot) at the ten foot, and in the further ten feet of each of these two end compartments is placed the brooder stove, either a five hundred chick anthracite or a five hundred chick blue flame hover. I prefer the anthracite brooder stoves for the earlier hatches when one may expect cold spells of weather, the blue flame hover for the later hatches—when one may expect anything from a heat-wave downwards (usually very much downwards, alas, in this benighted climate of ours!). On a very hot day, however, there is no doubt about it, it is a great convenience to be able to turn one's blue-flame out, if need be—the which you most certainly can't do with an anthracite stove. Where the latter are concerned my advice is, when you've got them nicely settled down, leave well alone, and don't attempt to run them too low or you're asking for trouble. My own experience is that I've never yet succeeded in running an anthracite stove successfully at less than 70 deg. under the hover—even given the best of anthracite.

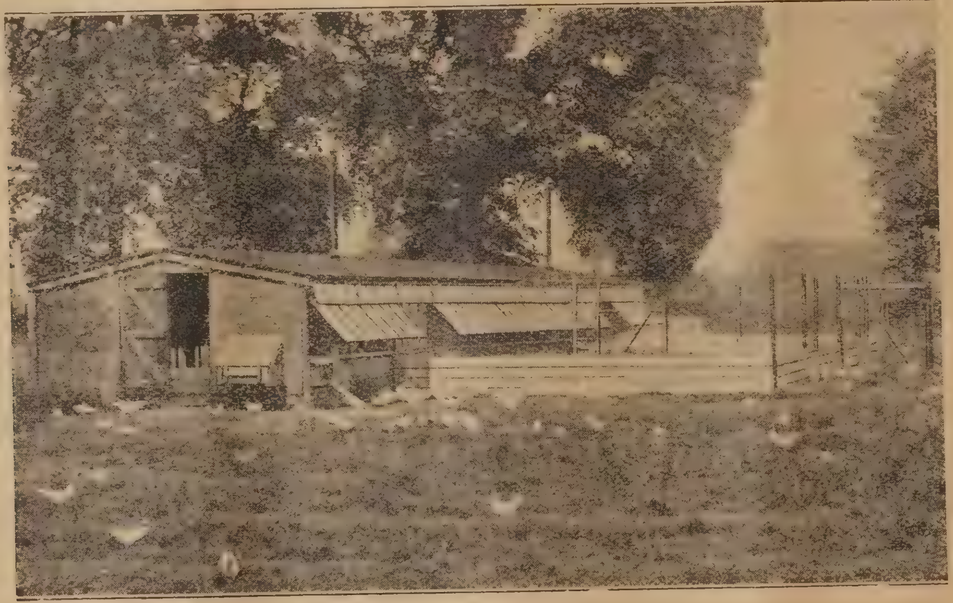
My first year's experience with them, I remember, was a beautiful switchback chart of either running the darned thing red-hot, or letting the fire out! However, one lives and learns, and I now take a deal of time and trouble in starting them slowly and getting them right at the start, with the temperature at round about 85 deg. under the edge of the hover, and a nice clean fire. After that, providing I don't attempt to run them too low, or, in fact, meddle with them more than need be, I find they give me very little trouble. Just a question of coaling-up morning and evening, and a shake first thing in the morning, again after lunch, and a real good hearty shake last thing at night. Above all, make sure you get the very best anthracite that's to be got for love or money!

The advantage of the anthracite stove over the oil hover, to my mind, is that during a bitter cold spell in March your stove will heat up the whole house more efficiently than the blue-flame can hope to do—though, of course, in either case, the temperature actually under the hood can be controlled as necessary. I like, however, to see my chicks ranging as far away from the stove as I can get them after the first few days, and therefore a fairly even temperature spread right through the house is an advantage. As for any form of curtaining round the hood, take my advice and scrap it! I want my chicks under my eye all the time, and if I had them stuffed behind frowsty curtains and what-not, I should be everlastingly wanting to push them out to see what they looked like! I believe there's more harm done "frowsting" chickens than in almost any other way, except over-feeding—and, after all, it's not necessary, so why do it?

To begin at the very beginning, one would need to go right back to the old problem of whether the hen or the egg came first, and if one could solve that problem one would be well on the way towards solving the whole problem of existence, and I've only been asked for an article on brooding and rearing! On the other hand, our Editor would be the first to agree that the whole question of brooding and rearing so indissolubly hangs on the question of sire and dam, that he'll grant me, I know, and, indeed, expect a line or two on the breeding flock, and may I very briefly size it up in half-a-dozen words: "Cull—and then keep on culling."

Now I can't afford myself, at present, to trapnest more than round about a couple of hundred pullets at a time—just for the sake of making up a very special cockerel-breeding pen or two. For the rest, I cull, and keep on culling, from the time the chicks are taken out of the incubator right through to the time when the first hatching egg is taken, and then hatching eggs themselves in turn are culled! I try to spend as much time as possible with the chicks the first evening they are brought out, and I at once knock on the head any little beggar not quite up to standard—and so save possibly a vast deal of trouble later.

One very soon gets to know them I find—the undersized short-bodied little specimens that I call "Tom Noddies"—all beaks and no bodies! You'll generally find them with their eyes closed, and when you pick them up they emit miserable little weak peeps of protest! Knock them on the head quick! You'll always get a few of them, it seems to me, even from the best of stock—for the matter of that, was there ever a litter of pigs born yet without a "pitman"? The great thing is to get rid of them on sight.


One of the 60 ft. x 15 ft. Rearing Houses.

At about the sixth day you'll begin to distinguish the little blighters that haven't digested their yolk properly. Again the same symptoms, and again the same treatment. And so on right through their lives—when you see a chick looking miserable and droopy-winged while the rest of the crowd are bright and bonny enough, doesn't it follow there's something radically wrong somewhere. Put the cod liver oil back on the shelf, and knock it on the head instead! Maybe you'll find, if you care to take the trouble to look, that the poor little beggar has only swallowed an inch nail or a dropped staple. (I killed a chick only the other day that had, somehow, managed to get down a 1 in. roofing clout!) In any even you have chosen the kindest way out. And so o through their chickenhood until we get to th "culling proper" stage, viz., culling for the L factor, or rather lack of it.

At the end of November I go round every pullet and every pullet that isn't in lay gets a cull ring And at the end of December I go round every pulle again (at night, of course, on the perch), an every pullet that isn't laying gets a cull ring Then, at the end of January, the same again. A the same time, of course, one is able to cull fo other defects, crooked breast, coarseness, lack o size, and the rest, and, at the end of it, thoug one may make a mistake here and there, one ma presume that most of the pullets left without cull ring possess, at least, the winter laying factor After this I start culling in due course for brood ness. Every bird, if she is in every other respec the type I'm after, is allowed one broody ring i the course of her pullet year—a second broody rin earns her a cull, and I can only say that wherea five years ago in my 100 ft. laying houses I ha five broody coops constantly in use, this pas season I have only found occasion to use two them. Briefly, every bird throughout her pulle year that checks or goes sick in any shape or for gets a cull ring. At the end of August I finall go through all the pullets again (the early moulter having gone off to Leadenhall meanwhile), an every bird not still in lay is culled—and so I arriv at a breeding flock that, while I can't guarante individual records, have managed to put up as hig an average as 205.56 in their pullet year. So muc for the question of flock average. Surely whe one speaks of flock average one is entitled to mea "culled flock average," for equally surely in thes hard times one can't be expected to hang on t one's "duds" for a whole twelve months on end —just for the purpose of arriving at a true flock average. For example, in the instance in question, I culled down the flock from 489 to 396. What their flock average would have been had I kept in the 93 doesn't interest me. All I know is I was glad to be rid of them.

As for the question of cockerels, I can't help feeling it is a mistake to go dodging about here and there. Personally, I feel I owe my success largely to building my strain up upon the Rev. Seymour Shaw's, and now that I have arrived at the stage of turning out my own cockerels I seldom have to go outside my own strain, save for a very special bird, to head a pen now and again.

(To be continued.)

MIDDLESEX AGRICULTURAL EDUCATION COMMITTEE.

COUNTY LAYING TRIAL, 1925-1925.

Report for First Period—October 15th-November 11th (inclusive).

ENTRIES.—Entries fell short of the maximum (200), largely owing to the unfavourable early part of the rearing season. The empty houses will be retained, and it is hoped that a full entry will be forthcoming next year. The final entry (after all rejections, etc.) was 146 pullets. All birds were carefully examined, and thoroughly disinfected on arrival, by Mr. W. Powell Owen and Mrs. G. Scolding. The veterinary inspection report is appended as follows:—

"It was with regret that I had to reject two pens from the breeders' section for symptoms of diphtheritic roup, also two individual pullets for a like reason. These were the only rejections for ill-health, the other two rejections concerning a single-combed White Wyandotte and a pen of Rhode Island Reds made up of three single-combs and two rose-combs. In the case of both Wyandotte and Reds' replacements were advised and attended to. In the case of the two breeders' pens no replacements were made, which I consider the soundest policy. No one likes to reject a pen for ill-health, and every competitor should take most careful steps to see that pullets sent to a Laying Test are clear of colds, watery nostrils, and diphtheritic patches in mouth. Long before date of dispatch they should be isolated, carefully fed, and managed to avoid any outbreak of colds prior to the test; and even when basketing them for dispatch to the trials they should be individually examined. Only along these lines can a clean bill of health be maintained at the trial, and such strict carefulness is only fair and due to other competitors and the Test Manager. Every bird was most carefully disinfected on arrival, and the steps and precautions taken should help towards a good bill of health, which I sincerely hope will be the case with your first Laying Test. Many excellent pens and individual birds were sent, but far too many were in full in an immatured state with no prospects of starting to lay for two or three months. On the other hand too many were in full lay, and while some of these pens (especially light breed) will go into a moult, the mild weather and the October commencement may not seriously affect the majority, as would be the case with a November beginning, and in inclement weather. Summer sunshine marked the days of arrival, and the birds were quickly got on to the grass, so that the weather was all in their favour if in full lay."

(Signed) W. POWELL-OWEN, President, N.U.P.S.

RESULTS TO END OF FIRST PERIOD.

Figures are Eggs and Points respectively.

Section 1. Division A. Light Breeds.—Dr. H. Corner, Pen No. 8 (W.L.), 42, 342. Countess of Strafford, Pen No. 29 (Bl. LaB.), 33, 290; Miss G. Compton, Pen No 16 (Bl Leg.), 22, 194; Mrs. D. A. Fowler, Pen No. 4 (B.L.), 19, 176; W. Poupart, Esq., Pen No. 5 (Bl. LaB.), 21, 172; Miss E. Elvidge, Pen No. 17 (W.L.), 19, 163.

Section 1. Division B. Heavy Breeds.—H. Pickford, Esq., Pen No. 6 (R.I.R.), 71, 736; Sir J. FitzGerald, Pen No. 15 (L.S.), 75, 698; A. P. Wimpenny, Esq., Pen No. 9 (W.W.), 68, 574; E. Fownes, Esq., Pen No. 14 (W.W.), 60, 525; G. Rose, Esq., Pen No. 20 (R.I.R.), 50, 462; R. F. Daintree, Esq., Pen No. 10 (R.I.R.), 49, 422.

SINGLE BIRD ENTRIES.

Section 3a. (Light Breeds).—R. W. Baker (W.L.), 18, 144; J. N. Williams (W.L.), 16, 132; J. N. Williams (W.L.), 13, 107; A. W. Brown (B.L.), 6, 65; F. E. Robinson (W.L.), 1, 8.

Section 3b. Heavy Breeds.—C. G. May (W.W.), 10, 82; F. E. Robinson (W.W.), 6, 50.

LONDON MARKET ADVICE TABLE.

DECEMBER, 1925.

By A. V. CLARKSON.

Well, here we are round to December again, and naturally everyone is, or should be, seriously considering what there is on his farm that can be turned into money, bearing in mind that the Christmas Market should be the most remunerative market of the year. Producers should take to heart the fact that this time of the year, if they are sending out poultry, it should be especially well prepared, because poultry at Christmas time only ranks with every other commodity, and is sold to a great extent on appearance. When I say this, I naturally take it for granted that the reader knows the difference between "scratching himself and tearing himself to pieces," and that he will appreciate the fact that quality counts, and rubbish, however great the embellishments thereto, will still fetch rubbish price. Of course, poultry sent alive is judged absolutely on its quality, but whether poultry be sent alive or dead, I must issue the warning that no producer should send his produce without having some indication of what the return will be, and Christmas this year is perhaps more serious than any during the last five years. Last month I mentioned the fact of the French money crisis. Unfortunately, this has materialised to a very, very serious position, and when one considers that the bulk of turkeys for Christmas comes from France (and, therefore, to a great extent controls the market price), and at the same time realises the shocking depreciation in the French currency, it will be readily seen that anything may happen, but mostly to the producer of turkeys who is sending his birds on chance. My serious advice to producers who have turkeys and geese, is to try and find such private trade as possible, and thereby create some sort of protection in case the market should go against them for the remainder.

CHICKEN.—The demand for chicken at Christmas will be for soft chicken of good size, and there will be very little demand for birds scaling much under 5lbs. To those who are unaware of the London trade, I would state that it is useless to send a bird that has thrown its spurs, because such chicken is classed in London as hard and cocky, and will not at any time realise the price of soft chicken.

DUCKLING.—The only duckling which will sell dead on the London Market is the all white bird, scaling 5lbs. or over. Small Duckling and Coloured Duckling should be sent alive.

HENS.—There will be a very good demand for really large fat hens at Christmas-time, but the small stuff if not sent a fortnight before Christmas should be kept over until the week after Christmas.

GEESE.—It is an extraordinary fact that geese at Christmas time have not the popularity that they had years ago, and we have to thank the cheap imported turkeys for this fact. Bearing in mind the remarks above regarding the possible cheapness of French turkeys, prospects for dead geese are none too hopeful. With regard to live geese, the demand will naturally be for a really good quality pen-fed geese. Of course, ordinary runner geese can be sold alive, but they do not fetch anything like so much as the properly-fed birds.

. . . .

After having given the above advice, the writer feels that, although it is a bit pessimistic, it is better to be forewarned than to build up big expectations which may not be realised. AND THE OUTCOME OF THE ABOVE IS THAT THE PRODUCER MUST FOR HIS OWN SAFETY KEEP IN TOUCH WITH HIS SALESMAN.

Scientific Poultry Breeders' Association.

BURY AND DISTRICT UTILITY POULTRY SOCIETY.

A meeting of the above society will be held on Friday, December 11, at the Y.M.C.A. Hall, Stanley Street, Bury. Mr. Norman Duxbury (President) will be in the chair.

Mr. Tom Newman will lecture on "Some General Problems of the Industry."

The Committee give a cordial invitation to all S.P.B.A. members and members of societies affiliated with the Lancashire Federation of Utility Poultry Societies say, ten miles' radius of Bury, so as to give them an opportunity of meeting other members.

SPECIAL POULTRY CONFERENCE.

A conference under the auspices of the Scottish National Poultry Council, and presentation of medals, etc., gained at the first Scottish Laying Test, will be held in the University Agricultural Lecture Hall, 10, George Square, Edinburgh, at 3.0 p.m., at Saturday, 5th December.

Addresses will be given by: Mr. T. Newman, Editor of "Eggs," on "Breeding for Production"; Professor Willard Thompson, Harper-Adams' College, on "Poultry Housing and Environment as a Factor in Egg Production"; T. Dalling, Esq., Wellcome Research Laboratory, Beckenham, on "Recent Work on B.W.D. and Roup" (illustrated); Dr. F. A. E. Crew, Animal Breeding Research Dept., Edinburgh University, on "A Review of Certain Recent Advances in our Knowledge of Poultry Breeding" (illustrated). All interested in poultry-keeping invited.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, NOVEMBER 27th, 1925.

GRAIN AND FEEDING STUFFS.—Fair supplies of British wheat are available, and, with an active demand, prices are higher at all markets, the average quotation being 11s. 10d. per cwt. as compared with 11s. 5d. last week. Spot supplies of imported wheat are on the small side and realise more money, No. 1 Manitoba at London averaging 14s. per cwt., an increase of 11d. per cwt. on the week. British malting barley generally meets a quiet trade, but recent values are maintained, while grinding descriptions are in little request at about late rates, except at Bristol, where, with an improved demand, higher prices are realised. Home-grown oats are in fair request and dearer at most centres, white varieties averaging 9s. 7d. and black 8s. 11d. per cwt. Foreign oats are in moderate supply, and with a fair trade prices are practically unchanged on the week. Maize is again dearer and Argentine averages 9s. 3d. per cwt. as against 9s. last week.

Bran and coarse middlings are in request and have advanced in value, the former averaging £7 17s. and the latter £8 16s. per ton. Maize products are in demand and realise more money, while other meals generally maintain late rates. Trade in oilcakes shows some improvement on the week, but prices are unchanged, except at London, where cotton seed cake realises less money.

MILLERS' OFFALS.—Bran (British): Bristol, £8 5s; Hull, £7 12s; Liverpool, £8; London, £7 12s. Broad Bran: Hull, £9 2s; London, £8 15s. Middlings—Fine (Imported): London, £9; Coarse (British): Bristol, £9 5s; Hull, £9; Liverpool, £9; London, £8. Pollards (Imported): Bristol, £7 12s; Hull, £6 15s; London, £6 17s. Rice Bran: Bristol, £7 10s; Liverpool, £7 5s. MEAL.—Barley Meal: Bristol, £9 15s; Hull, £9 10s; London, £9 17s. Maize Meal: Bristol, £11 5s; Hull, £9 17s; Liverpool, £10 2s; London, £10. Maize Meal (S. African): Bristol, £9 12s; Hull, £8 10s; Liverpool, £8 10s; London, £8 17s. Maize Germ Meal: Hull, £10; London, £9 5s. Maize Gluten Feed: Bristol, £11; London, £9 12s. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 10s; London, £9 12s. Bean Meal: Hull, £11 8s; London, £12 5s. Fish Meal: Bristol, £21 10s; Hull, £20 10s; Liverpool, £20 10s; London, £20

EGGS AND DEAD POULTRY.

British eggs are exceedingly scarce and with only very light arrivals from other sources, quotations for all best sorts hav again advanced sharply, but there is little inclination to purchase the cheaper classes of eggs, although these continue to become firmer in price. The improved business in dead poultry, reported in the previous week, has been set back and lower prices rule for geese and turkeys.

Week-end Prices—Eggs (per 120): British, 35s 6d; Irish, 33s 6d. 31s 6d; Danish, 34s 6d, 32s 9d; Dutch, 32s 9d, 30s 9d; French (brown), 33s 0d, 31s 0d; French (mixed), 26s 6d, 24s 3d; Belgian, 31s 6d, 29s 6d; Italian, 25s 9d, 23s 9d; Canadian, 21s 0d, 20s 0d; Lithuanian, 18s 6d, 17s 0d; Polish, 16s 6d, 15s 3d; Chinese, 16s 0d, 14s 6d; Russian, 17s 9d, 14s 3d; Australian, 25s 6d, 23s 6d; South African, 22s 0d, 20s 0d; Styrian, 19s 3d, 18s 3d; Argentine, 17s 0d, 15s 9d.

Dead Poultry (per lb.) · Fowls—Surrey, 1s 6d, 1s 2d; Irish, 1s 2d, 1s 0d; Others, 1s 3d, 1s 0d. Ducks, 1s 2d, 1s 0d. Geese, 1s 0d, 10d. Turkeys, 1s 5d, 1s 2d.

EGGS.

Per Doz.—Ashford: First, 3s 5d: Second, 3s 2d. Birmingham: First, 3s 6d; Second, 3s 2½d. Bridgwater: First, 3s 10d: Second, 3s 6d. Chelmsford: First, 3s 9d; Second, 3s 4¼d. Colchester: First, 3s 7¼d; Second, 3s 0d. Doncaster: First, 3s 10d; Second, 3s 8d. Dorchester: First, 3s 3d; Second, 3s 1d. Exeter: First, 3s 6d. Hereford: First, 3s 3d. King's Lynn: First, 3s 4d; Second, 2s 11d. Llandilo: First, 4s 0d; Second, 3s 9d. Mold: First, 3s 6d; Second, 3s 4d. Montgomery: First, 3s 6d. Newport (Mon.): First, 3s 6d, Second, 3s 3d. Norwich: First, 3s 6d. Oswestry: First, 3s 6d. Penzance: First, 3s 1d; Second, 3s 0d. Saffron Walden: First, 3s 7½d; Second, 2s 10¾d. St. Ives (Hunts): First, 3s 5d; Second, 3s 3d. Salisbury: First, 3s 6d, Second, 3s 5d. Skipton: First, 3s 6d. Truro: First, 3s 2d. Welshpool: First, 3s 9d; Second, 3s 6d. *Carlisle: First, 4s 0d. *Derby: First, 3s 6d. *Ipswich: First 3s 9d: Second, 3s 6d. *Lincoln · First, 3s 6d. *Shrewsbury: First, 4s 0d; Second, 3s 9d. *York: First, 3s 10d; Second, 3s 9d.

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 9d. Doncaster: First, †5s 3d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 7d; Second, 1s 4d. Newport (Mon.): First. 1s 6d; Second, 1s 2d. Truro: First, 1s 4d. Welshpool: First, 1s 6d: Second, 1s 4d. *Derby: First, †5s 6d; Second, †4s 0d. *Ipswich: First, 1s 5d; Second, 1s 4d. *Lincoln. First, †5s 6d; Second, †4s 0d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: First, †5s 0d; Second, †4s 0d.

(Continued at Foot of Next Column).

" Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, December 2nd, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of " Eggs " to their poultry-keeping friends.

Subscription to " EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of " Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for every-one concerned.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

PROOFS.—We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster First, †5s 9d; Second, †5s 0d. Exeter: First, 1s 2d. Hereford First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 7d; Second, 1s 4d Welshpool: First, 1s 5d; Second, 1s 3d. *Derby: First, †5s 6d Second, †4s 6d. *Ipswich: First, 1s 4d. *Shrewsbury: First 1s 6d; Second, 1s 4d. *York: First, †5s 6d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

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EGGS
THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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Edited by TOM NEWMAN.
Price TWOPENCE.

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Six Months " " 6/4
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The "Eclipse" Poultry Houses

WITHOUT THE SLIGHTEST DOUBT THE VERY BEST HOUSES EVER MADE.

MAINTAINING THE STOCK IN TIP-TOP CONDITION AND CONSEQUENTLY ENSURING HIGHEST PRODUCTIVITY.

No. II. 60 ft. x 12 ft. (six section), supplied to Mr. J. H. McInnes Skinner, Bramerton Grange, Norwich.

The correct housing of laying stock is acknowledged to be of great importance, and the poultry farmer who overlooks this point is neglecting one of the greatest essentials to successful poultry husbandry. The demand for the "ECLIPSE" houses increases rapidly, because our customers believe "THE BEST IS THE CHEAPEST." We undoubtedly "HAVE THE BEST." We will gladly furnish you with the name of our nearest customers, ALL of whom are pleased to permit inspection, so delighted are they with the houses and with the results obtained.

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UNDER ROYAL PATRONAGE
I O W
ALWAYS WINTER EGGS

Pedigree Wyandottes **Pedigree Leghorns**

For Egg Production.

ANOTHER TESTIMONIAL.

Bordon, Hants.

Dear Sirs,

I wish to order for delivery in October six of your Leghorn cockerels for mating with hens of your stock next February. We are very pleased with the hens bred from them this year, especially as they have laid almost equally well during the second year as the first year.

M. ESTRADIE.

PRICE OF COCKERELS.
40/-, 30/-, 20/-.
WRITE FOR OUR MATING LIST.

SANDOWN, - - I.O.W.

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Early hatched from individually recorded non-broody Hens!

The "HEYDOWN" STRAIN of Light Sussex will be found to combine the incomparable table qualities of the breed with unusually High Egg Production.

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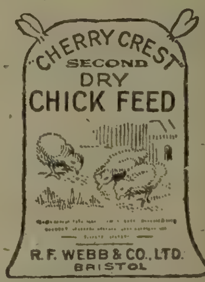


EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, DECEMBER 9th, 1925.

Editorial.

BREEDING FROM PULLETS.

In the issue of November 25th comment was
ade on the general advice to mate pullets to
cond season males, and the opinion again ex-
essed that you cannot compensate for im-
aturity on the female side by mating to an old
ale. Further, we expressed the opinion that
ere was no better breeder than a pullet **in her**
ime mated to a cockerel **in his prime.**

The following interesting letter from Mr. J.
ine confirms what we have said on this and
ndry other matters, but it would help us con-
lerably if any of our members or readers of
Eggs" would send us their experiences, whether
nfirmatory or otherwise. We are only speaking
om our own experience, and such data as we
ve been able to collect. In reference to the
orage of eggs, it is curious that we have failed
realise that evaporation causes the drying of
membranes, or perhaps we have failed to
alise the full significance of the bad storage of
gs intended for incubation. As to the resting
travelled eggs, Mr. Raine's story would appear
confirm what we had said, but the experiment
de in America was on a much larger scale, and
reover it was a comparison of eggs rested with
equal number not rested, and the latter gave
best results.

Mr. RAINE'S LETTER.

"I have read with interest your Editorial of date November 25th, and I can offer some striking confirmation of your arguments in support of :—

(1) Successful mating of cockerels and pullets.

(2) That there is no need to rest eggs after a journey.

(3) That eggs for hatching do not require to be aired.

Going back some years before the war, two of the most successful breeders and exhibitors of Langshans that we have ever had, viz., Mr. H. Wallis, of Brentwood, and Mr. J. Walker, of Henley, almost invariably mated cockerels and pullets for their Dairy Show exhibits in the following year. The reason they gave was that :—

(1) It was often impossible to obtain suitable eggs from old stock at the necessary time, and

(2) that so long as the parent birds were fully developed the results were absolutely satisfactory so far as the stamina was concerned.

The splendid results in their cases from the mating of fully-developed cockerels and pullets can be vouched for, not only by the prize list, but by men like Messrs. F. O. Piercy and P. H. Bayliss, who were at one time keenly interested in this particular breed.

It happened quite often that a pullet, the winner of the Dairy Show in one year, became the parent of a winner in the same show the following year. The same applied to cockerels. Had there been any injurious results of any mating on these lines it would never have been persisted in.

As to the resting of eggs intended for setting. The following fact certainly supports, even if it does not absolutely confirm, your contention that resting is not necessary. I well recollect the case of a setting of eggs being sent by a poultryman in San Francisco —who believed as you do—to London, with instructions that they were to be immediately returned to San Francisco. When they were received they were at once set, and seven healthy chickens hatched from twelve eggs. Taking into consideration, not only the length of the journey, but also the variations of temperature experienced, it seems quite clear that strongly fertilised eggs are but little affected by being dispatched to a distant destination.

On the third point raised, I had it several years ago from a man who made his living from selling day-old chicks, which he hatched from selected eggs bought from poultry-keepers round about him, that the moment he received them he put them into air-tight containers. The one thing that he was afraid of was evaporation. It surely scarcely needs to be pointed out that the greater the exposure to air—draughts in particular—the more rapidly evaporation takes place."

On the other point raised, as to why the commercial egg farmer pins his faith to the White

Leghorn, and does not consider a dual-purpose breed which would enable him to sell his cockerels at a profit, no comment has yet been made.

Let us put the question in another form, and ask: If the Light breeds or the dual-purpose breeds, such as the Rock, Wyandotte, and Rhode Island Red, are the most economical proposition for the commercial egg farmer?

There surely is good reason for discussion on this point.

Returning once more to the question of breeding from pullets, a correspondent writes:—

> "My eggs are good size, mostly 2 ozs. and over. Can I safely put a large-egg strain cockerel with eight or nine of my best pullets, hatched March 5th, in January to hatch my next year's layers without reducing the size of egg?"

Provided the pullets are well developed and the cockerel well matured, the size of egg will not suffer. If, on the contrary, these pullets were of the precocious type, laying small eggs as the result of poor bodily development, there would be danger of their transmitting this precocity to their progeny. They would inherit large-egg size, but they could not develop this character if they began to lay at a precocious age, because the bodily development would be small, and as the reproductive organs develop with the body the egg would also be small.

LEICESTERSHIRE COUNTY COUNCIL LAYING TRIALS.

Report for First Month—19th October to 15th November, 1925.

Many of the birds were laying when they arrived, and, in consequence, a few have gone into a slight neck moult.

During the month the weather has been very varied in character, the earlier period being comparatively mild, with a considerable quantity of rain, whilst during the last week the conditions have been much drier and colder, with considerable frost. Despite these changes the birds have kept in excellent health, and the egg production has increased steadily, rising from 210 eggs in the first week to 435 in the fourth. It is also satisfactory to note that the proportion of small eggs is low, and that the number of special grade eggs is quite up to what one should expect at this season of the year. In the Light Breed Section, Mrs. R. Crawford's White Leghorns have produced 75 eggs and in the Section for Heavy Breeds Mr. H. B. Howe's White Wyandottes have produced 95 eggs. In the Section for Two Birds. Mr. B. J. Buckler's Rhode Island Reds have laid 35 eggs, one bird having laid 22. Mr H. B. Howe's White Wyandottes, No. 91, has put up the best record for the month with 26 eggs, 22 of which were over 2ozs. each in weight.

SUMMARY OF LEADING PENS.

Section A. Light Breeds.—Mrs. R. Crawford (W.L.), 76 eggs; Mr H. B. Howe (B.M.), 67; Mr A. C. Moore (B.L.), 67.

Section B. Heavy Breeds.—Mr. H. B. Howe (W.W.), 95; Mr. Myles Morton (R.I.R.), 76; Mrs. E. Ball (R.I.R.), 79.

Section C. Any Pure Breed (Two Birds).—Mr. B. J. Buckler (R.I.R.), 35; Mr H Glover (W.L.), 29; Mr S. Ryle (R.I.R.), 16.

CHESHIRE COUNTY COUNCIL.

EGG-LAYING COMPETITION, 1925-26.

Single Bird Test. Report for First Month—October 15th to November 12th, 1925.

The flock average for the month is 11.1 eggs per bird. The average for the light breeds is 12.9, and for the heavy breeds 9.8 per bird. Eight birds in the light breed section, and nineteen birds in the heavy breed section did not lay.

Two birds have been broody. Three birds have been through a neck moult

SUMMARY OF LEADING PENS.

Light Breeds.—A. D. Tobler (W.L.), 29 eggs; Mrs. E. Johnson (W.L.), 20; J. Jackson (W.L.), 19; Mrs. Viney (W.L.), 21; A. Dixon (W.L.), 19; E. Carter (W.L.), 19

Heavy Breeds.—E. Patterson (Buff. Orp.), 22; J. Hignett (W.W.), 24; E. Carter (W.W.), 23; R. Darlington (W.W.), 21; J. Hignett (W.W.), 21; E. Patterson (Buff Orp.), 20.

Utility Duck Club Notes.

By HUGH B. CARRINGTON.

It is to be hoped that these remarks will not be
late to be of use to readers who are in doubt ab
the winter feeding of ducks, and other kindred pr
lems, but there has been such an avalanche of queri
particularly on the question of feeding, that I f
something should be said on the subject. Many
regard what I have to say as elementary, and wh
they get as far as this the remedy is in their o
hands.

There are two or three main principles which m
be remembered. Firstly, animal life in the shape
insects, is to all intents and purposes extinct. Secon
grass has virtually no food value at this season, e
if there is any of it left; and, lastly the air t
perature being low, the birds require more food to k
up their body heat, and if they are to lay eggs, a
ther supply of food over and above what I may t
their maintenance ration. In short, it is much
feeding a herd of cows. Each cow receives a main
ance ration, and then a certain quantity of food
gallon of milk she yields. If only the mainten
ration is given the milk yield will be poor, so it is
ducks. Of course, they may not lay, whatever
they are given, for various reasons, but it is absolu
certain that they will not lay, because they can
unless they are given the materials out of whic
manufacture the eggs.

To revert to the first two principles mentio
insect life must be replaced by something else.
best substitutes are fish and meat meal. My own
ference is for the former, and at this time of the
I feed 15 per cent. of it in the mash, as my obje
the production of breeding stock. I never exceed
proportion, besides a higher percentage might pos
taint the eggs, and if there is one thing duck egg
ducers should avoid it is any risk of this kind.

Grass, as has already been said, is valueless, t
fore, whenever possible, raw green stuff should
provided instead, either chopped up in the mas
stuck in the wire netting of the runs for the bir
peck at.

Now, with regard to the ration generally, it is
prising how many people who have written me
seem to fight shy of maize; it is one of the
valuable, and, at the present time, one of the che
foodstuffs which can be given. There is very
risk of getting a duck too fat, and, therefore, I
cate a generous supply of maize in one fo
another If desired, the grain feed need cons
nothing else, while, in my opinion, there should
least 1-5th of maize in the mash feed.

With regard to quantities, many people go o
principle that the birds will eat all they need i
or ten minutes, and that anything left over s
then be removed. I used to think this mysel
am now convinced that this is wrong, and,
quently, feed the ducks early in the afternoon
leave the food till they have been put to bed.
the birds pick up in the first ten minutes mig
termed the maintenance ration, what they take

e production ration. If a bird eats more than the aintenance ration. and still does not lay, it will prob- ly either be putting on fat, which it has lost from eavy laying, and getting back into good condition, or is one of those comparatively rare ducks which is itting on fat simply for the fun of it.

There is only space to touch lightly on one or two ore points about winter laying. Firstly, ducks itched this year ought, if of good strain, to lay at e latest six months from date of hatching, though en the best strains can be put off the lay by un- ward circumstances, in which is included bad man- ement.

The last point is that ducks are no more fond of ld high winds than chickens, and, therefore, if it possible to provide them with some shelter from ese, so much the better.

I must now pass to other topics of a non-technical scription A General Meeting of the U.D.C. was lled at the Palace Show, in response to requests om various sources, the object being to give an portunity for the discussion of several points, for hich there had been no time at the Annual General eeting. The most important of these were the Duck gg Campaign and the possibility of the U.D.C. hold- g its own official Duck Laying Test during the period 26-27

Several members present made most useful sug- stions *re* the former, and provided thereby an un- nited field in which the Hon. Secretary and the uncil can display their energies It is fitting here say that all such suggestions are exceedingly wel- me. I know the Council will be in complete agree- ent with me when I say that what is wanted is the ain-work of all members, and not only of those few ho have been elected on the Council. The problems hich have to be tackled are not easy, and no one, wever small the number of ducks he or she ssesses, should shy of contributing their ideas on atters such as popularising the duck egg, marketing, d so on. It is possible that a competition, with izes for the most brilliant ideas or this subject, ay be announced later.

With regard to a Duck Laying Test, the general inion of the meeting was entirely favourable to the ganisation of a test, but it was agreed that this and her matters raised should all be referred back to e Council for full discussion at its next meeting. I all hope to be able to say something of the results the Year Book. May I remind readers of these tes. who have not yet done so, that they should at ce send in any advertisements they wish published. ith the greatly-increased membership advertising in e Year Book should be a really profitable proposi- n Advertisers can be sure that all readers are enly interested in ducks, and my experience last ar was that nothing like enough people did adver- e, for requests were frequently received for names breeders able to supply stock, eggs, etc., of breeds t mentioned, or in quantities which could not be pplied by those who did advertise. The same was e case with appliances, foodstuffs, etc., and I should glad to feel that whatever any member wants he uld be sure of finding it advertised by a reliable dividual or firm in the Year Book.

Modern Poultry Feeding.

By **TOM NEWMAN.**

STALE FOOD.

I have received the following letter from Capt. Beales :—

"Dear Sir,—The following experience may be of interest to those who search in vain for the elusive winter egg :—

I had some food, viz., bran, S.G.O., maize meal and fish meal on my hands for about four months which was being fed as a dry mash to a flock of 100 R. I. Red pullets, and eggs were not coming along as they should be. They were not eating enough of this dry, but took no exception to it wet (I feed both). Suspecting the food I made a special point of obtaining some absolutely fresh food, which replaced the old dry mash. The result was amazing, and they are now laying very well indeed. This is a warning to me and perhaps others against the use of stale food. It would be interesting if you could add to your remarks upon how long you consider such foods as the above, including middlings, may be stored without deterioration? The fresher the better always, but when one buys in fairly large quantities, which is necessary to cut expenses, some is bound to be staler."

I should mislead a great many of our readers if I attempted to answer the question contained in Capt. Beales' letter. So much would depend upon the food itself, and the manner in which it is stored. He has, in fact, answered the question himself. Food cannot be stored without deterioration, in his own words, "the fresher the better" is the answer. Palatability is a big factor in successful feeding, stale food is unpalatable and dangerous. The result is, there is a minimum consumption and the egg yield suffers. There are foods which are unpalatable. A sample of fish meal with an excess of oil may not always upset the digestive system, but it results in a decreased consumption of mash because the birds dislike the flavour. The oil of meat meal is sometimes described as "beneficial," but when there is an excess it often happens that it will turn rancid, and that may be another cause of making a mash unpalatable. Maize germ meal and maize gluten feed, when extracted by what is known as the "wet" process, are sometimes packed in a moist condition, and tend to go sour. When meals are stored in bags, and these are placed one on the top of the other for any length of time, they become packed and heat, as there is always a little moisture present—that induces mould. Some foods are unpalatable in themselves. Palm nut kernel meal is a good example. The danger is that the birds may satisfy their hunger, but they do not eat the surplus required for egg production.

When we have the S.P.B.A. Experimental Farm running we may be able to make a few experiments in this direction, I mean as to how far palatability affects consumption of mash, and consequently egg production. If I might give a little advice to some of our readers, it is that they should use their nose as well as their eyes and hands when buying foods. We shall soon have the chicken rearing season upon us, and it may not be out of place here to warn those who buy the dry chick mixtures from the corn merchants to be sure that these are new stock, and have not been held over from last year.

THE WELLINGHAM EXPERIMENTS.

I am repeating here, by request, the mash used in the chicken rearing experiments at Wellingham in the spring. The question has arisen as to the cost. I am not able to give an answer to this at the present moment, but, if my recollection serves me, I believe Miss Malcolm told me it worked out at 14/3 per cwt. The idea was to feed a "commercial" mash which would give us the very best results. The most expensive item was the dried milk, which cost 45/- a cwt. We knew its immense value, but even so at that price it was uneconomical, and my instructions were to compound a mash which would contain the minimum amount of milk and give maximum results. The results were in every way excellent, but "maximum" is not claimed, we have much farther to go yet. The mash, which was as follows, was fed from the shell :—

20 lbs. Bran.
45 lbs. Middlings.
10 lbs. Sussex Ground Oats.
10 lbs. Maize Meal.
5 lbs. Dried Skim Milk.
5 lbs. Dried Yeast.
5 lbs. Soya Bean Meal.

To this was added 30 ozs. of the following mineral mixture :—

60 lbs. Steamed Bone Flour.
20 lbs. Powdered Oyster Shell.
20 lbs. Common Salt.

The results justified the inclusion of such expensive ingredients as the milk at 45/- and dried yeast at 26/- per cwt. There is room, however, for further investigation, and we may be able to cheapen it yet. I need not say that the quality of the bran and middlings was the best obtainable. It was fed as a dry mash.

I have mentioned the quality of bran and middlings. In reference to the latter, so many samples sent me are nothing but fine bran, and when this is fed with a poor sample of bran the egg yield is bound to suffer. I know good middlings are hard to obtain in these days, but it is useless to expect eggs from hens fed on such samples as are too often sent to me. Where they are so bad as they frequently are, it would be advisable to reduce the quantity and add a corresponding amount of ground oats. It may add to the cost of the mash, but it will not add to the cost of producing the egg.

The "All-Purpose" System of Brooding and Rearing.

By MAJOR W. HAYLAND WILSON.

Continued from Page 379. (Copyright.)

Now to get back to the chicks. My broodi
starts actually in the incubator—and I believe i
one of the secrets of the game. I like to see t
pipping start on the evening of the 20th day wi
just a slight film of moisture on the glass in fro
and I leave them religiously alone until mid-day
the 22nd day, when out come the egg trays f
better or for worse, and any chicks left unhatch
go "down the hole"! I never bother abo
hatching percentages — be hanged to t
stragglers, I've never managed to do any go
with them yet. If they can't come out up to ti
they're best left alone. At mid-day, therefore,
the 22nd day out come the egg trays, out co
the felts (which are left in until the hatch is ove
the ventilators are opened, I tack a double thi
ness of brown paper over the glass in front, w
a couple of drawing pins, so that the chicks
in absolute darkness, and there I leave them u
mid-afternoon of the 23rd day—and, I belie
this period of absolute rest and quiet just at t
stage is of the utmost importance in giving th
a fair start in life. Between four and five, the
fore, on the afternoon of the 23rd day off t
go to the brooder house in their nursery trays
so bursting with life and energy that let
advise you not to attempt to draw out the nurs
trays and hope to get the cover on afterwards,
you'll have the floor littered with chicks in
time—but slide on the cover first, getting y
missus, or the hired lad, as the case may be,
push the little beggars in under while withdraw
the drawer ; have a rug spread ready waiting
the incubator-room table, pile up your cove
nursery trays one on top of the other, wrap
rug over all, and out with them to the broo
house.

This all sounds very elemental, but I'm
writing for experts—I don't pretend to be su
ciently expert yet myself. I'm writing for
beginner, and when I began nobody told me th
little simple things, and oh! that I might re
the time and temper wasted, fumbling over j
such trivial little businesses as this transfere
from incubator to brooder stove. A friend
mine (and a very sound common-sensible fell
too) informed me only the other day that he
intended returning his nursery-drawer covers
the incubator people, because he couldn't th
what they were for, and thought they'd been s
in error, and was proceeding to take his chi
out to the brooder-houses in baskets! Sou

lly, doesn't it? But all I can say is, when I hink of all the silly mistakes I've made from me to time, since I started on this game, I can nly blush with shame. One begins by thinking 's all so easy, and only ends by finding out " how uch there is to it," as our friends say on the ther side.

House No. 3, 60 ft. x 15 ft. Rearing House.

Round the hood of the stove, at a distance of bout 2 ft. 6in., has been run a length of ½ in. esh wire-netting, 12 in. high, the two loose ends oined with a wire skewer, and I've a length of essian, a foot wide, with dress hooks sewn on at ntervals of a foot, that I can hang on the top elvedge of the netting, if I want to give them a ttle extra warmth. Twenty-four hours before I ake the chicks out, half an inch of dampish sand as been spread all over the brooder-house floor, overed with an inch of chaff (wheat or barley—ever, on any account, oat straw, remember, or ou'll encourage vermin). The sand, for a radius f 2 ft. 6 in. under the hover, has been left uncovered and raked over two or three times, so hat it has practically dried out—for although my dea is to get them on to damp sand after the first wenty-four hours or so, there is no need, as far s I can see, that one should be too drastic at the tart. The sand actually under the hover, thereore, is left uncovered, and turned, up to within n hour or so of actually taking the chicks out, nd is only then covered with chaff. Meantime a ouple of pint drinking founts have been placed nder the hover some hours previously, upon a oard, in order to take the chill off. Throughout he rearing I disinfect the drinking water with ne tablespoonful of Milton to two gallons of vater. I use earthenware founts, and three or our times during the day these founts are sluished ut with fresh clean water, and again overnight, after the chicks have settled down, so that clean founts may be waiting for them in the morning. I believe this question of constant change of water to be altogether important, as with baby chicks one can't avoid their fouling the founts. Just before putting the chicks out I scatter a measureful of chick feed all around inside the wire, with a scattering on the board on which the founts stand. I use, as a measure, a 1 lb. cake tin, and find that, with my average hatch, round about 350 to 400 chicks, that a full measure of the chick-feed should see them over the first twenty-four hours.

I have been rearing these past few seasons over the first few weeks on one of the "cooked" chick-feeds with excellent results. At the fortnight old stage I begin gradually to add No. 1 size cut wheat. At a month old I get them on to two parts kibbled wheat to one part of the chick-feed, and at the two months I gradually substitute very fine cracked maize for the chick-feed. Please don't think from the foregoing that I set up to be a feeding expert—I simply try and follow broadly upon approved lines—and in this respect if one wants advice when it comes to the whole question of feeding, one has only to go to our Editor for it, I am thankful to say! At present, all I know is, that I have no reason to grumble at results from working on my present lines.

Well, having brought out the four nursery trays of chicks (I work my incubators in pairs—two 250-egg machines to the hatch), with the help of the aforesaid lad we lower them on to the floor just outside the wire, and having unwrapped the rug off comes the top tray cover, and, one at each end of the tray, we gently, yet as quickly as possible, place them well under the hover—counting, of course, as we go.

The total is then entered up on the "Roll Call"

—a half sheet of foolscap that I have pinned on the board hanging on the centre post—and from then on until they are all actually perching, every chick is checked off as disposed of, otherwise it is extraordinary how quickly one loses count.

By this time the chicks are perking up and beginning to take a fresh interest in life—and their first lesson begins!

Get down on your hands and knees and begin very gently tapping with a finger nail the board on which the water-founts stand. Tap intermittently—try and imitate a hungry hen, trying to pick up her ration before the others get it—and you'll have half the chicks in the hatch all over you inside ten minutes! Next start clearing little holes in the litter all round the edge of the hover, tapping them up to each cleared space in turn, pointing out with your nail the flakes of chick-feed to them—and if, inside of the first hour or two you haven't taught half those chicks to scratch for a living, then you've failed in your duty. All I know is, that when I come upon the scene next morning I expect to see every chick scratching away for dear life—and if I don't then I continue the lessons. And ever afterwards, every time they're fed they are "tap-called" to it. I only feed three times during the day, overnight, after they had settled down, that it may be ready waiting for them in the morning, a small feed, round about half to three-quarters of a measure; again at about mid-day the same; and in the evening, say round about half an hour before they're thinking of "jugging down," a full measure, or in fact as much as they can comfortably get outside. In fact, the only time in the day that I like to fill their little crops up is the evening feed—they've time then to sleep it off! For the rest of the day I like to keep them verging on the hungry side, so that they'll spend most of their time scratching—scratching—that's the secret of healthy chicks—keep them scratching! That's why one can't lay down any stated quantities when it comes to chick feeding. You've got to find out for yourself. Watch your litter, and watch your chicks—they'll tell you soon enough. There are three alternatives; you can overfeed, in which case you'll find chick-feed lying about in the litter, and your chicks a picture of dejection, crouched moping round the stove—dull-eyed and drooping-winged, bored stiff with life in fact; or you'll find them hanging about looking equally bored possibly, because you've rather overdone it, and they're fed up with looking for chick-feed that isn't there—in which case their behaviour when you chuck them a handful or two will quickly explain the situation. Thirdly, the ideal—most of the chicks busy scratching, the rest—their bright eyes twinkling, basking contentedly well out from the stove, for just ten minutes or so before they're up and busy again, and a few flakes of chick-feed left here and there in the litter—just to make it worth their while to keep on scratching. Do forget, of course, about the middle of the mo ing of the fifth day, to introduce them to th first green feed. Chop up a handful or two preferably either watercress or chickweed that been gathered the day before, and feed it to th on a board, tapping them up, of course, as usu and give the little beggars as much as the tackle in an hour or so. You'll find that one two of the most enterprising will presently st racing round with a bit in the usual game "catch as catch can," and the rest will ch him—and they'll not take long to find out that good to eat! After that, every morning they given their rackful, and the rack is kept filled as requisite, until they are able to get out re larly and so find their own greenstuff. Until th "ad lib'" is the motto! The more you can them to tuck away the better—they'll not more than is good for them.

(To be Continued.)

WYE COLLEGE COUNTIES' LAYING TRIALS, 1925-26. (KENT C.C. AND SURREY C.C.),

Held at the South-Eastern Agricultural College, Wye, Ke

These trials, which consist of 240 birds in pens of five each, are divided into two separate sections, viz.:—Kent Sec 130 birds; and Surrey Section, 110 birds. Each county separate breed sub-sections. (See records herewith).

Each pen of five birds is housed separately; all the birds trap-nested, and the eggs weighed. A system of scoring is used which gives preference to eggs of large size, normal sh and texture. The score values are based upon seasonal ma prices By this method eggs produced during the wi months have a greater score value than those produced at o seasons

On the whole, the birds received were in good condi healthy and of rather a higher standard than those sent in vious years The type of birds on the whole is very good.

The birds were given until October 15th to settle down, on that date recording commenced,

Report for First Period—October 15th-November 11th, 1925

Health etc.—The health of the birds throughout the m has been satisfactory. One bird only has been in hosp Thirty-one birds have been in moult, while ten birds have p through the broody coops.

Egg Production.—The number of eggs produced during month (28 days) has been 2928, which gives an average of eggs per bird for the whole of the flock. The number of in lay has been 174.

LEADING SECTION POSITIONS (KENT).

Figures are Eggs and Points respectively.

White Leghorns.—Dr. Harbord, 88, 920; Capt Hardy, 81,

White Wyandottes.—Messrs. F. and T. Neame, 93, 937; Moore, Esq., 77, 797.

Rhode Island Reds.—R. Freeland, Esq., 88, 876; The Jones and Moore, 77, 733.

Light Sussex.—Mrs. M. Crookes, 88, 832; Dr. Harbord, 80,

A.O.V. (Sitting Breed).—Messrs. Campkin Bros., 55, 494; M. Crookes, 36, 374.

LEADING SECTION POSITIONS (SURREY).

White Leghorns.—The Lady Lugard, 101, 1022; J. B. Ba Esq., 97, 933

White Wyandottes.—H. Rowntree, Esq., 109, 986; Hudson Bros., 83, 909.

Rhode Island Reds.—A. Brown, Esq., 85, 852; A. Kirsch, 78, 797.

Light Sussex.—Sir J Leigh, Bart. 69, 695; Miss E. M. Mo 52, 488.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answers all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

BODIES ” for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

E. F. (Abernethy) asks: "Does it affect layers to change from wet to dry mash?" At this season of the year it would badly affect layers to change from wet to dry mash. At all times such changes should be made very gradually, as birds are easily upset by a change. My correspondent would be wiser if he began by rearing his chicks on dry mash in the Spring, and made no change at present. But if he is very anxious to do so, it would be advisable for him to wait until the birds are in full flush of lay, and the days are longer. He wants a good dry mash for layers kept semi-intensively; they have good grass range, and plenty of green food. The best would be:—2lbs. bran, 4lbs. middlings, 1½lbs. maize meal, ½lb. Sussex ground oats, 1lb fish meal or meat and bone meal. For breeding stock the following would be a good mash:—2lbs. bran, 4lbs. middlings, 1½lbs ground oats, ½lb maize meal, ½lb. fish meal, and ½lb. dried yeast. Grain ration should be equal parts kibbled maize, wheat and oats. A good dry mash for chicks would be:—21lbs bran, 10lbs. alfalfa meal, 35lbs. middlings, 21lbs. Sussex ground oats, 14lbs. maize meal, and 8lbs. fish meal.

F. H C (Dorset) writes for a table of affinities, giving details as to what relationship one could mate without loss of stamina and egg production, and that entirely from the utility point of view, and not in reference to show birds. He has a very good cockerel—a well-developed bird, and good colour and size, with good records behind him ,but he has no breeding hens other than the cockerel's aunts, and he asks would this mating be detrimental to stamina and egg production? He encloses sample of meat and bone meal, and asks if it has the same nutritive qualities as meat meal, or should he give an extra quantity in the dry mash, and if so how much? He is using the following dry mash: 2cwt. bran, 4cwts. middlings, 1cwt. Sussex ground oats, 1cwt. maize meal, and 1cwt. meat and bone meal For the winter months he reduces the bran by one-half. His birds are laying very well now. Many laid 25 to 28 eggs in October, and the records for this month are quite as good. He is anxious to know whether "Dento" meal and bone meal supplies sufficient animal food to make up the wastage. He asks what is my opinion of flaked maize in place of maize meal or maize germ. He states that he is unable to take advantage of our scheme of co-operative supplies, as there is no depot in his district —In answer to the first question I would advise my correspondent to have nothing to do with the table of affinities. There is no greater mistake made than in breeding by chart It is always a question of the selection of the individual, and not how close you can mate. One may go very close if the individuals are exceptional, and a very wide mating may give disastrous results if they are inferior. The only table of affinities is Felch's Chart. This involves in-breeding in two forms —dam to her son, and sire to his daughters—there is one other form of in-breeding, viz., brother and sister. I do not think, from my correspondent's description of his birds that his mating which he suggests, of the cockerel to his aunts, would be detrimental to either stamina or production, but it is up to him to see to the selection. The sample of meat and bone meal is a very good one As to his question whether it contains the same nutritive qualities as a pure meat meal, the percentage of albuminoids would not be so high. That is perfectly understood, but the latest developments would seem to prove that a good sample of meat and bone meal is of better value than a pure sample of meat meal, as it is the mineral salts which counts. The records of my correspondent's birds are in every way satisfactory. I would suggest that as the days are now shorter, he sees to it that they get a very heavy feed of grain at night—as much as they will consume. As to my opinion of flaked maize in place of maize meal or maize germ, flaked maize is more easily digested. A good sample of germ meal, I would prefer the maize meal, and the S.P.B.A. can now offer an excellent sample at 10s 3d. per cwt., f.o.r., in not less than 5cwt. lots. With reference to his inability to obtain foods under our Food Purchase Scheme, I may inform him that we have depots both at Southampton and Winchester, and would possibly be able to serve him from Poole shortly.

H. A. S. writes that he has read that if R.I. Red pullets or hens are mated to a Brown or Red Sussex cockerel, they will give all birds with a good white leg and flesh, but if a Light Sussex cockerel is used, 25 per cent. of the chicks will throw yellow leg and flesh, but asks if this is so, and why?—I cannot be certain as to the percentages, but it is so, and the reason is that the Light Sussex was bred from the Light Brahma, which is a yellow - legged bird. It is a question of reversion on crossing. It is rather an interesting point. and Light Sussex breeders occasionally experience the appearance of the yellow-legged individual in their flock.

P B. (Westmoreland) asks if I consider January a good month to hatch Leghorns for early pullets, or would I leave it over until February?—In my view the best value in Leghorn pullets is the January-hatched pullet, and those hatched in April. There is also this advantage that White Leghorn cockerels hatched in January will fetch quite a fair price for table, whereas if hatched later they will not. Pullets which are hatched in January will begin laying before the end of June, and continue on through July, August, and September, when egg prices are good. They may fall into a partial moult in October, but the same would apply to a February or March hatched pullet, which would not begin laying until July and August, and the cockerels would be of smaller value for table.

J. G. D. (Dundee) sends samples of meat and bone meal and ground oats. The former at 15s. 3d., carriage paid, is a clean and sweet sample, excellent value for money. Sample 1, S.G.O.: These are not good, and do not compare favourably with the cheaper sample, which, although of excellent value for the money, is not at all a good sample of S.G.O.

R. G. (Churchdown) wishes to know of sex-linked crosses with the Light Sussex, and what I consider the best one.—The following is a list, it must be understood that these are the male birds): Brown Leghorn, Buff Leghorn, Buff Rock, Buff Orpington, Indian Game, and Red Sussex It would depend to some extent on the purpose for which "R. G." wanted the cross made. For a dual purpose bird, the Leghorn crosses, either Buff or Brown would be best; the Indian Game would give a fine table bird and a poor layer. The same remark would apply to the Red Sussex, unless it would come from a strain with which had been bred for egg production. The crosses between two heavy breeds generally result in increased broodiness.

Eblana (Drumcondra) writes in reference to the mash which was described as "deficient" in last week's issue of "Eggs" under Modern Poultry Feeding. He presumes that if meat and bone meal were used, and the bran reduced to 1lb., it would be satisfactory. There would be no necessity to reduce the bran unless he wished to include alfalfa meal. He asks if I find hens do not like alfalfa. Occasionally we get complaints, but these on investigation are found to be due to the sample. Hs asks what I think of the following mash:—4lbs. pollard, 1lb. bran, 2lbs. maize meal, 1lb. ground oats, ½lb. alfalfa, ½lb. yeast. ½lb. fish meal. This is a good mash, but if intended for layers would be too expensive. As he is using pollard it would be best not to use bran. We distinguish between pollard and middlings. He complains that people want a general mash suitable for cockerels, pullets, breeders and layers. Well, now, isn't that just like 'em?

J. L. (Barnet) is not getting eggs, and he badly wants to know why. The pullets, White Wyandottes, are 258-egg strain, and were hatched at the end of April. His feeding consists of a wet mash of two parts clover meal, one bran, three toppings, one biscuit dust, one ground oats, half bean, quarter meat meal; wheat three parts, and oats one part as the grain feed, 2ozs. per birds at night.—Apart from the fact that he birds were late hatched, and would be longer in coming into production; the feeding is wrong, and the quality pood. The clover is only chaff, and contains a very high percentage of indigestible matter The ground oats are inferior, and the toppings little better than fine bran. "J. L." should change his feeding as follows. but he must get better quality or nothing will avail.—4lbs. of toppings, 1lb. biscuit dust, 1lb maize meal, 1lb. alfalfa meal, 1lb. fish meal or meat and bone meal. As grain feed give three parts kibbled maize and one part wheat The birds are under-nourished at present, and want feeding up. I do not think they need a tonic. "J. L." must not put too much reliance on that 250-egg strain; there are good and bad of all strains.

W H W (Worksop) sends me four samples of ground oats. No. 1. which he can purchase locally at 19s. 6d. This is an excellent sample but not so good as the S.P.B.A. are offering at 12s. 6d., f.o.r. Sussex. In consider the price (19s 6d.) exorbitant. No. 2 at 18s. 6d. carriage paid. This also is a good sample, but 18s. 6d is too much money. No 3 at 16s. 6d., carriage paid. This is not such a good sample as the other two; moreover it is not "Sussex" ground, but it is better value for the money. No 4, which my correspondent can purchase locally at 16s. 6d., is the poorest sample of the lot; not so good as No 3, carriage paid. Particulars of the S.P.B.A. have been sent him by post, as requested.

C. W. (Thetford), being a new reader of "Eggs," he would like to know more of our system of rearing chicken. He has generally bought a ready-made mash, but a man highly recommended our system as advised in the Year Book, and he wishes to know if we can send him a copy of the same, as the 1926 edition would not be available as yet.—I am sorry that no copies of last year's Register are available, but he might care to try the following system. Give the mash from the first day as follows:—21lbs. bran, 10lbs. alfalfa meal, 35lbs. middlings, 21lbs. Sussex ground oats. 14lbs. maize meal, and 8lbs. fish meal. This should be continued until the chicks are eight weeks old when they should be placed upon the following:—3lbs. bran, 4lbs middlings. 1½lbs Sussex ground oats, ½lb. maize meal, and ½lb meat and bone meal. This should be continued until the birds are five months old, when they should be placed upon an ordinary laying mash. As to his system of feeding, this consists of one ounce of wheat and maize every morning per bird, and a mid-day meal consisting of a wet mash made of one part Sussex ground oats, one biscuit dust, one fish meal, one maize meal, four middlings. This may prove rather fattening if the birds are not producing eggs but in other respects it is quite a good mash. The sample of Sussex ground oats he sends is most decidedly not "Sussex" ground, and is not good value at the money.

J. L. (Cavendish) asks me if I can give him feeding instr tion for pigs. This is outside my scope. He often fe tempted to try our laying mash for young pigs. I am afra this is a matter in which I cannot advise him. I can recomme Buff Rocks for an exposed position, but I do not know the pa ticular individual whom he mentions. Yes, I do recomme sowing. Lucerne as a permanent green food for stock. T mineral salts would be supplied in the article he mentions, b it is rather an expensive method of supplying them. Wi regard to the incubator: I have had no personal experience of th so I am not in a position to recommend it.

DORSET LAYING TRIALS.

Poultry Instructor's Report for First Month of Laying Trials 1925-6.

All birds arrived in a satisfactory state of health the begi ning of October, weather continuing fine until the 15th October, when the test commenced. Since then the weather h been somewhat erratic—19th-23rd heavy rain, again on 26th, 27t November 1st, 2nd and 3rd. Fine and mild, 17th, 18th, 24th, 25t 28th, 31st October, 4th and 7th November, then fine with co wind from 8th until 11th, end of first month.

Sixty-four birds have been moulting during the month.

Two birds have been broody: No. 28, 10 days; No. 214, thr days.

Four Pens—Nos. 20, 21, 37, and 38—have not yet commenced lay owing to not being hatched early enough.

All birds in Pens 29, 41. 45, 50 have been moulting heavil and have not yet contributed to the egg basket.

Seven birds have passed through hospital for various co plaints varying from one day—one week, but are now back their pens. Eight others have had medicine.

Three thousand eggs have been sent to the Dorchester Mark since the commencement of the trials (751 from 1st to 14th Octobe 2289 for first month, October 15th to November 11th).

Light Sussex No. 189 leads the test for the first month, layi 27 eggs in 28 days, scoring 254 points, market price for ea being 7s. 6d.

It may be interesting to visitors to know the leaders of t different sections, and, therefore, an extra ring has been plac on the leaders which may be seen in Pens 6, 26, 32, and 43.

A. TURNER, County Poultry Instructor.

14th November, 1925.

LEADING PENS IN EACH SECTION.

Section 1.—N. V. Fowler, Bridport (W.W.), 621 pts.; Capt. G. M. Whitley, Corfe Mullen (L.S.), 599; J. P. Harding, Know Hall (R I.R.), 594; Mrs. D. B. Clark, Steepleton (W.W.), 533.

Section 2.—Major Leschallas, Charminster (W L.), 590; M Trehane, Hampreston (W.L.), 589; Capt. Turton, Ensbury (W.L 501. R. J. Aitken, Moreton (W.L.), 399.

Section 3.—H. E. Wilds, Marnhull (L S.), 797; H. J. Northove Buckland Ripers (L.S.), 749; Mrs. Neave (late of Frampto (Bf R.), 641; W. J. Southwell, Hazelbury Bryan (R.I.R.), 623.

Section 4.—Miss Oddy, Miloorne St. Andrew (W.L.), 556; M Davis, Pulham (B L.), 217; Mrs. Roberts, Silton (W.L.), 172; Runyard, West Lulworth (W.L.), 150.

MEMBERSHIP OF THE S.P.B A.

So many of our readers are under the impressio that they must necessarily be scientists, pedigre breeders, of farmers on a large scale to rend themselves eligible for membership of the S.P.B. This idea is quite incorrect. The S.P.B.A. is o to assist all grades of poultry-keepers, from th proprietor of the 10,000-hen farm to the intensivi with his dozen or so birds; all are entitled to equ benefits. The Five Shilling subscription bring with it many advantages, namely: Free Advice b Post, a Copy of the Annual Register, the Benefit of the Discount System, and many othe advantages too numerous to mention here. Yo should write for full particulars to the Secretary TOM NEWMAN, The Beeches, Rudgwick, Horsham Sussex. The financial year began on 1st September.

Correspondence.

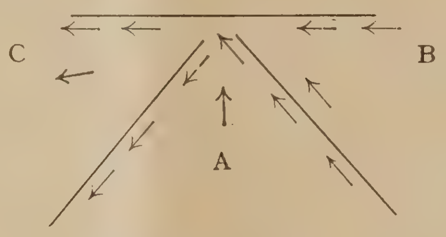
MR. SOMERVILLE AND VENTILATION.

To the Editor of "Eggs."

Dear Sir,—I am sorry to see that Mr. Somerville n his reply to my letter still keeps up his pseudo-scientific attitude, and declines to show how he puts his principle into practice. I note he is indifferent as to whether his system is accepted or not, but I hope he will pardon me if I say that his articles radiate an enthusiasm which is altogether at variance with this statement. I would suggest that no man who wields the pen of a ready writer, as he certainly does, should be indifferent as to the results of his advocacy of any cause. It's too much like handing out high explosive and being ndifferent as to the use to which it may be put. To a great many readers his style must be most mpressive, and, certainly, in felicity of expression I, a plain Lancashire man, am handicapped in my attempt to correct his perspective in this matter, and that of such of your readers, who, having not too much money and less experience, have been attracted by the apparent cheapness of his method.

Let me say at once that I feel he has allowed his enthusiasm to distort his sense of proportion, and caused him to express his ideas in rather extravagant language. For instance, when he speaks of having received a "mass of correspondence" he is using an expression which has a powerful effect in influencing people, but what he exactly means by that is left to the imagination. A number of people have written to me approving my letter in which I have tried to pin him down o essential points, but I should not call it a "mass of correspondence." Again, he speaks of the air nlets of his house as "ports." That sounds a lot better than saying that the inlets consist of a row of holes bored in the sides near the base, but which tatement really conveys a correct impression of his device?

However, I must deal with his theoretical diagram (page 339), and I do not hesitate to say hat it is incorrect both in theory and practice. Please do not imagine that I am one of those thick-eaded people who take an intense dislike to all heories. A theory, provided it is based on the whole of the facts of the case, is an exact statement of what will happen in practice, but there are a number of factors which are not considered in the diagram in question. Mr. Somerville has tated a number of axioms, but let me remind him f one or two others affecting the case, such as The angle of reflection is equal to the angle of ncidence," "Change of motion takes place in a traight line," "Frictional resistance is proportional to the speed, etc.," all bearing on the subject. Now in his diagram the aperture through which the force B., which is a wind pressure of, say, 50 miles per hour, must pass to C. becomes highly congested since some of the pressure applied to the side of the roof is deflected to this aperture, and the velocity of the current at this point may be 200 miles per hour. The resistance to the current then becomes so high that the path downwards to A. becomes the line of least resistance, and consequently the force B. tends to drive down the inside of the roof on the side opposite to B. It must be borne in mind that the ascending force A. will barely exceed 5 miles per hour, and has little effect in opposing B. Some of the force B. will then pass out through the "inlets" at the base, no matter how small these may be, and the rest will set up currents in the house itself and then pass out to the point C. Air is subject to compression, and even if the house were quite airtight, except for the ridge opening, the force B. would enter. To explain the whole of the actions and reactions would require a full course of the science of physics, which I am not competent to give. The following diagram is much nearer the truth than that of Mr. Somerville :—



I do not condemn the Apex type of house entirely. Like most other things on this earth, it has its uses, and what I object to is its abuse. As a colony house of not more than 14 ft. square it can be made very useful, but not on Mr. Somerville's lines. With the Editor's permission I will try to prepare an article on this and on housing generally for next week.

Yours faithfully,
TOM CARTER.

VENTILATION.

To the Editor of "Eggs."

Sir,—May I trespass on your space to the extent of a few lines in an endeavour to put the matter of ventilation of poultry houses in a comprehensive and simplified view?

Is it not a fact, and to a great extent unrecognised, that there is no earthly reason why air should enter a building or chamber unless it is made to do so in one of three ways?

(1) By pressure from the outside, in which case

an air inlet **and exit** must be provided. The ordinary span-roof and lean-to types of house with apertures distributed over various parts would come within this category.

(2) By diffusion, which is complete or partial and generally very inadequate for the purpose. Mr. Price's straw houses would appeal to me as being, possibly, one of the best of these; I consider his contribution one of the most valuable in the matter of housing.

(3) By suction or induction, which may be self-generated and controllable to any degree. My reason for offering this view of the matter is that some of the technical details unavoidably contained in my recent article, however elementary, may have obscured the obvious to some of your readers.

In reply to the letters in the issue of 18th ult. on this subject:—

Mr. E. Ismay.—I am in entire agreement that given the necessary pitch to the roof the lean-to type of house could, to a great extent, be adapted to the induction principle as shown by Mr. Wimberley. But I suggest that it would not only be an uneconomical procedure if the depth from back to front were anything over, say, ten feet, but also if less than that there would be grave danger of instability in a high wind.

In constructing such a house, would we not have to give it, as a type, some other name than "lean-to"?

With regard to the air inlets of self-ventilating houses being above floor level, the reasons for this were given in my article.

Mr. Ismay says, "Are we dealing with gases and atmospheres that are lighter than air, i.e., that naturally rise to the top? I think not. **Carbon monoxide"** (the black is mine) "and carbon dioxide (C.O.$_2$) are heavier than air. Their natural exit is through the floor."

I quote Mr. Ismay as I read from my copy of "Eggs," and am hoping that your printers have been guilty of an error, because as it reads it appears to be rather staggering in so far as the suggestion that carbon **monoxide** is exhaled by animal life.

My medical knowledge is exceedingly limited, but my experience with carbon monoxide (C.O.) has been very intimate over a period of twenty-five years, and I know it to be one of the deadliest of blood poisoning gases. I am, therefore, anxiously wondering if this statement is correct. Would some medical authority among your readers answer the question, which must be of vital interest to us all? Can a bird, or any animal, generate carbon monoxide in its internal economy and live to do it? Also, is it possible for this gas to be generated in any way in the ordinary functioning of a poultry house?

If Mr. Ismay's suggestion holds good there is the greater necessity for a continuous **upward** current of air in the ventilation of poultry houses. May I correct his statement that carbon monoxide is heavier than air; its density as compared with air (=1) is 0.973, and therefore lighter.

With regard to the suggestion that carbon dioxide (C.O.$_2$) would fall to the floor and filter through holes—always providing these were not choked with litter.

Surely it may be regarded as certain that all foul gases generated in a poultry house under ordinary working conditions will be in a state of diffusion with the air, and the percentage sufficiently low to render the density such that a very slight increase in temperature will carry the mixture to the top.

I cannot imagine the percentage of C.O.$_2$ being so high as to cause it to drop out of diffusive combination and fall. If, as I and at least one other, have already explained, there should be a barrier of cold air at the top of the house, then it is possible that the fouled atmosphere may hang about in stratas. If it were present in such quantity as to fall out of combination and drop to floor level my impression is that the birds would soon be sitting on gilded perches, pecking at golden grain out of golden troughs, but not laying golden eggs.

Mr. Ismay's last paragraph but one, describing the possible conditions which obtain towards induced ventilation in a lean-to house, is the first contribution of real value we have had in defence of the type. I could have wished, and hope, for a more elaborate communication on the subject from him. My own experience, and that of many others, is against it, but that is not to say **it cannot be done,** and certain structural conditions which he has employed may have secured the desired end. If so, there are many readers who would be grateful for his advice since they **have** these houses, and it is very undesirable to continue using what one feels is unsuitable apparatus.

Mr. Ismay's theory and practice would bring the ventilation system under the first of the three mentioned in my letter above, and if successful should be of very great value. Can he conquer the dragon, DRAUGHT?

With reference to rollers on sliding door. A pair of such rollers cost me sixpence, hinges for the purpose would have cost ninepence.

"Smallholder."—I am sorry the type of vent indicated in my original article should have caused him to "take the count," but it would appear that he lacks courage since he wants someone else to catalogue his objections to the Apex house for him.

Anyway, I can hardly be held responsible for his inability to differentiate between a diagram and a working drawing.

The following extracts may be of interest to "Smallholder." They are from letters received from one of the first applicants for plans nearly a year ago, who is an important member of the S.P.B.A., a man of extensive technical knowledge, large producer and of distinct executive ability: ". . . . . The Apex house which I arranged as a brooder house has been in action for some time, and it perfectly successful . . . . . . it is the finest thing in brooder houses I have seen. . . . . am building Apex houses as fast as I can in my pare time."

Incidentally he discovered a weak spot in the original design, and his suggested remedy was adopted forthwith. In referring to it he says: ". . . It is a mere detail, and in no way interferes with the splendid qualities of your design."

Thus we see how some nurse my baby for me. Its service as a brooder house was outside my contemplation when designing it. I regret that, except by correspondence, we are unknown to one another.

"Smallholder's" remark about snow and rain needs no comment.

That the Apex house will not appeal to the necessities of all goes without saying. Personally I hold no brief for it beyond the fact that it lends itself rather better to the induction system of ventilation and provides me with all I require as a laying-sleeping house at a third the cost of the span-roof type. Since "Smallholder" is convinced it is no good, why does he worry about the sale of plans? To supply these is a distinct favour on my part—even if to some extent a moral obligation—and they are generally purchased by those who are enthusiasts for progress in the poultry industry, and who for some good reason—which must be quite unknown to "Smallholder"—can estimate the value they may ultimately be to them.

As a congenial occupation their preparation has its limits, but I have received more compensation in the way of letters of appreciation than any monetary consideration.

Yours faithfully,
C. WINTHROPE SOMERVILLE.

LIGHT v. HEAVY BREEDS.

To the Editor of "Eggs."

Dear Mr. Newman,—I have been very much interested in your two recent Editorial articles in "Eggs." One entitled "Porridge," which appeared two weeks ago, and the last entitled "Why?" appearing this week.

Your Editorials are always interesting and full of "horse" sense, and these last two, exposing many silly fallacies among poultry people, to my mind are particularly interesting.

There is, however, one query which you asked in your first letter, and answered in your second, which I must draw attention to, as I feel that, as a commercial egg farmer (and I am sure there are many others that will support me), you have not stated the case correctly.

I have in the past kept the heavier breed, namely, the White Wyandotte, and had to discard her after three years' careful comparison with her lighter sister for the following reasons:—

1st. All my houses are built to allow of 4½ sq. ft. per bird. Some carry 1,700, others 500 birds; in actual practice I find that the larger the house the less sq. ft. per bird is possible. It naturally is my object to have a breed that will thrive under this treatment, and what other than the light one will? I found that where I could house 500 Leghorns safely I could only put 400 heavies. I have to consider my egg receipts from a house point of view as well as the individual records. I found that there was very little difference in the actual performance of the two breeds, but naturally my house with 500 Leghorns in the year produced in cash very much more than the 400 heavies.

2nd. I also found that the 400 heavies eat about the same as the 500 lighter breed. Another gain.

3rd. Leghorns in coming into lay, lay fewer small eggs before getting into their stride than the heavies.

4th. Broodiness is almost absent in the light breed.

5th. Lastly, I found that the heavy breed actually required a sort of coaching in the art of perching, otherwise they lie about the floor of the house unnecessarily fouling it.

I submit that these reasons are very material, and are hard to explain away. I will admit, however, that the heavies have the advantage in the following particulars, but even these advantages do not, as far as my experience goes, balance the disadvantages detailed above.

1st. A greatly increased value of the young cockerels and old hens as meat.

2nd. Much more easily controlled in their runs, and more docile in the houses.

3rd. The heavier sister perhaps makes a better mother where incubating artificially is not practiced.

Yours faithfully,
HECTOR M. MORRISON.

We are pleased to have Mr. Morrison's letter on the above subject. We did not attempt to enter fully into the arguments in both cases, but left it open for discussion by our readers. The other side of the question may possibly be presented by those who favour the heavy breeds as the best commercial proposition.—(Editor.)

A DISCLAIMER FROM KARSWOOD.

To the Editor of "Eggs."

Sir,—Our attention has been drawn to a statement which appeared in "Eggs" on September 30th, 1925, as follows:—

"All the humbug of the much-advertised spices and the testimonials which accompany them we can treat as humbug in the first place, and the testimonials come from ignorant or unobservant people."

The dictionary definition of humbug is: "An imposition, hollowness, pretence, one who so imposes, to deceive, to hoax."

As the proprietors of the much-advertised Karswood Poultry Spice (containing ground insects), we feel the above statement will be taken by your readers as a reflection upon the integrity of those people whose testimonials, on behalf of Karswood Poultry Spice, have been published week by week in the leading poultry papers, daily papers, and Sunday papers, for over eleven years—different testimonials every week from all classes of poultry-keepers in all parts of the country, giving their names and full addresses in every case.

So far from being humbug, everyone of these testimonials is absolutely genuine; and, as regards the writers being either ignorant or unobservant, we can only say that their records and egg books prove them to be some of the most successful poultry-keepers in this country.

We therefore feel (and we feel sure you will agree, Mr. Editor) that your remarks are not intended to apply to the writers of the testimonials printed for Karswood Poultry Spice, and we trust you will accord us the courtesy of your columns to make this disclaimer.

Yours faithfully,

E. GRIFFITHS HUGHES, LTD.

ALFRED MARLAND, Director.

WEST SURREY POULTRY SOCIETY, LTD.

WINTER LAYING TEST, 1925-26.

Held at Chilworth Poultry Farm, under the management of Messrs. Hudson Bros.

Report for the Second Month (Four Weeks)—November 2nd to 29th.

The health of the birds has continued good; the pullet reported in hospital last month having returned to the pen, and no other cases of any kind having been detected.

The broody coop has had no occupant throughout. There are still fourteen birds which have not laid an egg during the test, several of these are in moult.

The total eggs for the second period was 1,335 (10.43 per bird), as compared with 1,222 (9 54 per bird) for the first month. The highest daily total was 62, and the lowest 37. There has been a noticeable increase in the number of first-grade eggs, though several pens leave much to be desired in this respect. Five pens have exceeded the limit of 50 second-grade eggs, and several others are likely to forfeit marks shortly for the same reason.

Sir John Leigh's Light Sussex No. 64 wins the award for best individual score of first-grade eggs, Capt. Britt's Wyandotte reverting to second place

HUDSON BROS., Secretaries and Managers.

Figures are Eggs and Points to date.

White Wyandotte.—Capt. M H. G. Britts (b), 126 118; Burrows Lea P. Farm, 106, 106; Capt. M. H. G Britts (a), 84, 84; H. J. Wills, 89, 74

Rhode Island Red.—W. Ezzard. 106. 91; H. W. Homewood, 86, 85; J. B Bantoft, 56, 52.

Light Sussex.—Sir J. Leigh. 118, 118; Burrows Lea P. Farm, 141, 98.

White Leghorn.—W. Ezzard, 108, 108; Mrs. C. R. Harding, 80, 77; Sir J. Leigh, 84, 77; Burrows Lea P Farm, 113, 73.

Black Leghorn.—H. G Hood and Sons (a). 80, 79; H. G. Hood and Sons (b), 78, 75: H. Rowntree, 70 65. Each pen consists of four pullets.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

NOTES FROM LANCASHIRE.

I hear that Mr. E. Collier, of Igol, Preston, has been appointed Secretary to the Lancashire Utility Poultry Society in succession to Mr. C. Parker, who has resigned.

This office also carries with it the duties of Secretary to the Society's International Egg-Laying Test at Hutton, periodical reports of which are always most interesting.

Mr. Collier will continue to hold the office of Honorary Organising Secretary to the Federation of Utility Poultry Societies. He is also Secretary of the Poultry Social Club, which meets periodically at Preston to discuss matters.

His new address will be at the Society offices, 22, Chapel Walks, Preston.

Mr. Richard Green, of Farringdon Park, Preston, writes to say that in the final report of the Harper-Adams' Laying Trials, 1924-25, in Section 3, Small Flock (R.I. Reds), he is credited with fifth position; that is correct, but he also won the Single Pen A.O.V. Section with R.I. Red pullet—record 240 eggs, and in our report the name in respect to this bird was given as Groom instead of Green.

THE EXPERIMENTAL FARM.

Sixty of the pullets reared intensively in the Wellingham experiment arrived yesterday, and it would be difficult to find a more healthy, vigorous or well-developed lot on any utility farm in the country. Miss Malcolm and Mrs. Pember must have been proud of them, and it is a very encouraging indication of what may be done with fowls reared entirely intensively from the shell. In spite of the cold weather a good number of eggs were found in the crates. A few of the pullets are moulting, but we must remember they are February hatched. Miss Hone, the manageress of the farm, has now charge of them, and I am hoping soon to start the first of the series of experiments. The birds will be divided into five pens of twelve each for the feeding experiments, and still kept entirely intensively. Time presses, and we have much to do before we are ready for the work. Shortly I hope to be able to publish a photo and description of the house which has been built. We shall mate some of the pullets early next year, to see what results we can obtain from intensively-kept stock as far as hatchability and rearability are concerned. The test will be a severe one, and we shall have to be very careful as to the deduction we make. The one important fact now is, that we have very successfully reared healthy, vigorous pullets intensively from the shell, but we are not out of the wood yet, and there is much to be learnt from our experience.

PROFESSOR THOMSON AGAIN.

A reader in S. Africa sends me the following cutting from the "Cape Times," dated November 2nd. We must not take him so seriously as he takes himself. We were twenty-five years behind the times when he was here. In S. Africa we are a hundred years, and when he reaches Australia we shall no doubt be described as uncivilised. We will hope the rest and change will ultimately prove beneficial :—

"A GREAT LOSS TO SOUTH AFRICA."

AN AUSTRALIAN VISITOR'S MODEST CLAIMS.

"I am the greatest authority in the world on poultry-keeping" was the claim advanced by Prof. D. S. Thomson, who has been visiting Cape Town during the week-end while returning to Australia by the 'Demosthenes.'

"Between 1900 and 1020," proceeded Prof. Thomson, "I worked out the very greatest experiments in poultry-keeping in the whole world, and this has been acknowledged by the whole of the American Press. So far as poultry-keeping is concerned, South Africa is a thousand years behind the times, and England is a hundred.

"I wrote to General Hertzog with regard to lecturing at the Agricultural Colleges in the Union. The South African Government invited me to deliver these lectures, but it made no proviso in regard to my accommodation and so forth. Consequently I have to continue my voyage to Australia—to the great loss of South Africa. I could have given them information in regard to poultry-keeping that would be worth a million pounds to them. A very large number of ex-pupils of mine are here now, as the Union Government sends two students every year to my college—the Hawkesbury College of Agriculture, which is the biggest, the best-equipped and best endowed institution of its kind in the whole world. The New South Wales Government make it an annual grant of £100,000.

"It would have paid your Government to have got me to stay here a few months, and that at no cost to the country. I had a letter from General Hertzog on the subject, but your immigration authorities have retained the letter in their possession. I showed them the letter before I was given permission to land."

CLAIMS TO LABOUR.

Changing the subject, Prof. Thomson went on: "I am rather an interesting personage in regard to my profession, and also in regard to politics. I am the oldest Labour man in the world."

"How old are you?" asked the "Cape Times" reporter.

"Sixty-five," was the reply. "I was the originator of the Labour party in Australia, and consequently the originator of the Labour movement in the whole world, but I am not a Communist."

Prof. Thomson, who was born in Aberdeen, has been re-visiting his native land in company with Mr. A. I. Robertson, M.R.C.V.S

SELECTION OF THE MALE.

I have a very interesting question from a Lancashire member. He says :—

"I have paid two guineas for a White Leghorn cockerel; the dam's record is given as 274, and I have every confidence in the breeder, and rely on what he tells me, but the bird does not please me His comb is not well developed, he is angular, nervous, slack in feather, and altogether an unpleasing specimen. I don't want to return him to the breeder, who is a friend of mine, and I am sure acted in good faith,and has sent me a bird which was bred from a 274-egg hen. I want to know whether this cockerel is good enough to mate on his dam's record. Would he be likely to breed good layers? Is there anything in the selection of the male bird by external characters? Would you reject a bird if you knew for certain that he came from a dam with a good record, because his appearance did not suit you, and you were breeding only for eggs? I would keep the bird, if you think that, in spite of his appearance, he would be likely to breed some good layers."

In my view the bird would not breed good layers, in spite of his dam's record, which we will accept as correct. I believe that the external characters of a cockerel should conform to the pedigree. If that is somewhat obscure, we can put it in this way; a good layer exhibits certain characteristics, which it is unnecessary to enumerate here. Those characteristics she will transmit to her progeny, not to all in same degree, for some will inherit more from their sire, and there will be the influence of the grandparents and ancestors farther back. In some cases the progeny may have inherited more from the ancestors than the immediate parents, and this would appear to be so in the case of the bird mentioned above; so that, whatever his dam's records may be, it is extremely unlikely he will sire pullets with the constitution of good layers. The constitution which they inherit from him will prevent their being good layers, although some may inherit so much more from the dam, that they may perform fairly well.

THE PELVIC BONES AND THE MOULT.

A question which is frequently asked: "Whether the distance between the pelvic bone and the breastbone is the same with birds in moult as with birds in full lay?" I am answering here for the benefit of our novice readers. A fowl in full lay consumes a larger quantity of food than one which is not. The intestines are about double their normal size during periods of heavy production. The increase in size is due to the stretching of the walls of the intestines. At the same time the ovary and oviduct are also greatly increased in size and weight. When the hen is in full lay the abdomen becomes much enlarged, due to the enlarged intestines, ovary and oviduct. The pelvic bones are well spread. As the bird goes out of lay both the abdomen and the pelvic bones contract.

THE FOOD PURCHASE SCHEME.

The following is an extract from a letter from Messrs. Berney-Ficklin and Owen :—

"Almost since its inception we have purchased the S.P.B.A. mashes through your Food Purchase Scheme. We may say we have been very satisfied in every way, both as to the results achieved, the excellent quality of the mashes and the convenience in the purchase thereof.

Would it not be possible for the S.P.B.A. to market two chick mashes:—(a) "First mash," 6th day to four weeks, and (b) an intermediate mash, 4-8 weeks? After the 8th week, of course, the standard "Grower's Mash."

In answer, may I point out that the chick mash at present offered is quite suitable up to eight weeks when the chicks can be put on the Grower's mash. The scheme is making great strides, and we daily receive a large number of letters of appreciation, but it is still in its infancy, and we have much to do before we can perfect it. However, we are now getting the co-operation of many big wholesalers, which was lacking at the start, and they are recognising the great possibilities of of the scheme, so that we shall have their support in many cases instead of their opposition.

I might point out that the S.P.B.A. are not vendors of foodstuffs, they are simply buying for their members, acting on instructions from the General Meeting in 1923. The scheme is not being run for profit. If there is a surplus at the end of the financial year, it is probable the Council may decide to pay it back to those who have bought through the scheme as a bonus. It must be distinctly understood, however, that this is only my own suggestion, and is only spoken of as a possibility. Much will depend on the total turnover, which is increasing daily. I must repeat, in response to many enquiries, that we shall not yet be in a position to supply in one cwt. lots. It will take some time to arrange this, but it will be done.

Mr. Frank Shattock writes:—"I enclose samples of the layers' mash as you requested we should do. The orders have certainly been sent on very promptly, and my hens have laid very well on it."

PRICES OF MASHES, ETC.

The following meals can be supplied in 5 cwt. lots and upwards of one kind free on rail:—

Fish Meal (Pure White)	**20/0**	**F.O.R.**	**London.**
,, ,, ,, ,,	**20/0**	**F.O.R.**	**Bristol.**
,, ,, ,, ,,	**19/0**	**F.O.R.**	**Swansea.**
,, ,, ,, ,,	**19/3**	**F.O.R.**	**Tynemouth.**
,, ,, ,, ,,	**19/9**	**F.O.R.**	**Grimsby.**
,, ,, ,, ,,	**19/3**	**F.O.R.**	**Bradford.**

PRICES OF MASHES. Per Cwt.

	Layers.	Growers.	Breeders.
F.O.R. LIVERPOOL	**11/9**	**11/9**	**12/3**
F.O R. LIVERPOOL	**12/3**	**12/3**	**13/9**
F.O.R. LONDON	**11/6**	**11/6**	**12/3**
F.O.R. LEITH	**10/9**	**10/6**	**11/8**
F.O.R. LEICESTER	**11/0**	**11/0**	**11/9**
F.O.R. GREENOCK	**12/0**	**12/0**	**13/3**
F.O R. KING'S LYNN ...	**11/6**	**11/6**	**11/9**
F.O.R. BELFAST	**12/9**	**12/6**	**12/9**
F.O.R. BRISTOL	**11/9**	**11/9**	**12/9**
F.O.R. SOUTHAMPTON ...	**11/6**	**12/0**	**12/0**
F.O.R. PLYMOUTH	**12/6**	**12/9**	**12/6**
F.O.R. ABERDEEN	**12/3**	**11/9**	**13/9**
F.O.R. HARROGATE ...	**12/9**	**12/6**	**13/6**
F.O.R. GLASGOW	**12/9**	**12/9**	
F.O.R. STAFFS	**11/9**	**11/9**	**13/0**

Sussex Ground Oats F.O.R. London: 13/6 per cwt.
,, ,, ,, F.O.R. Sussex: 12/6 per cwt.
,, ,, ,, F.O.R. Bristol: 13/0 per cwt.
,, ,, ,, F.O.R. London: 13/- per cwt.

Mr. Clifford de Kusel asks us to say that he has received a letter from Muirhead of Logie, Kirriemuir, Forfarshire, without any signature. If this catches the eye of the writer, perhaps he will send on his name.

APPLICANTS FOR MEMBERSHIP.

Walsh, J. Keele, Landguard, Lee-on-Re-Solent. Hants
Bishop, C. W F., Bromstead House, near Newport, Salop.
Churchill C. J., "Holmead," Curry Mallet, Taunton.
Stevenson, O. R., Bottom Farm, Mapledurham, near Reading.
Bagley, J. H. Aston-, Dean P.F., Kingsley, Bordon, Hants.
Wayt, H., 9, Crebor Street, East Dulwich.
Lucas, R. W. Lucas, White Ash Lodge, Richmond Park, Surrey.
Gayton, Miss M., Much Hadham, Herts.
Warwick, F., Lears Farm, Churchstanton, Chard, Somerset.
Johns, J., 6, Young's Building, Tantobie, Co. Durham.
Milliard, C., Dodds How, Crosthwaite, near Kendal.
Gardiner, Sir Robert, Westwood, Mayfield, Sussex.
Fulton, K. G., Knollhead, Kettins, Coupar Angus, Scotland
Purkis, F., Red Lane, Kenilworth.
Marshall, C. H., Hemswell Manor, near Lincoln.
Butterworth, J. W., 190, Hope Street, Leigh, Lancs.
Gunter, Mrs. D., Rhu, Tarbert, Loch Fyne, Argyle
Waring, A., Loft Kennels, Allerton, Bradford, Yorks.
Chapman, F, Castle Farm, Quinton, Birmingham.
Sheard, Miss A., 49, Park Road South, Birkenhead.
Craigie, T., Thorpe Nursery, Amondbury, Huddersfield.
Steboing, F. M., Hurn Farm, Hightown, Ringwood.
Fitt, A. R., The Bungalow, Soberton, Hants
Rippen, A. Stuart, The Laurels, Four Marks, Hants.
Henshaw, Haydn, Kirk Hallam, Ilkeston, Derbyshire.
Young, W., Ivy Cottage, Corley Moor, near Coventry.
Brownlie, Miss J., Treesdale, Symington, Lanarkshire.
Langton, E., The Elms, Enderby, near Leicester.
Brereton, Mrs. E., Wyandotte P.F., Worthenbury, Wrexham
Lewis, E., Smithfield House, Smithfield Road, Pontardawe.
Kirkup, Miss L., Blackcleugh P.F., Medburn, near Ponteland, Newcastle-on-Tyne.
James, E., Spring Villa, Flynongain, St. Clears, Carm.
Saunders, T., 191, Wandsworth Road, London, S.W.8.
Roberts, H. A., Plaitford House, near Romsey, Hants.
Mayor, W., Merry Tree Farm, Baldwin's Gate, Newcastle, Staffs.
Rolls, P. J., Frankland Mount, West Monkseaton, Northumberland.
Heape, Mrs. E. J., Forde, Ashford Carbonel, Ludlow, Salop.
Denholm, W. N., 15, Leith Street Terrace, Edinburgh, Scotland.
Fleet, C. J., "Buena Vista," Stansted Road, Bishop's Stortford.
Maxey Fruit Co., Ltd., Fittleworth, Sussex.
Hunter, W. Hill, 291, New Church Road, Hove, Brighton.
Stansfield, Mr, 278, Railway Road, Nelson, Lancs.
Morley, A. E., 24, Cambridge Terrace, Gateshead.
Hindley, Miss V. M., The Rectory, Lutterworth, Rugby
Hindmarch, J. L., 41, Milton Street, Saltburn-by-Sea, Yorks.
Cooper, G. F., 209, St. Vincent Street, Birmingham.
Moncrieff, H. W., Drumbog, Fossoway, Kinross-shire
Jones, C. H., "Parkdale," Twyford Gardens, Banbury.
Land Miss M. E., Tigh-na-Chree, The Hill, Charing, Kent.
Lazzolo, J., "The Moorings," Gayton Lane, Heswall, Cheshire.
Duvar, Mrs. J., Hillview Cottage, Cawdor, Nairn
Pike, Mrs. H B, La Solana, St. Aubins, Jersey, C.I.
Shepherd, J., White Brow P.F, Hollins, near Whitefield, Manchester.
Lord, S, Lodge P.F., Luma, Rossendale, near Manchester.
Yoxford and Darsham Farmers' Association, Ltd., Yoxford, Suffolk.
Barker, A., Sycamore Farm, Kenton, Stowmarket, Suffolk.
Slater, W., Dovecote Road, Hill Top, Eastwood, Notts
Russell, C. R., Dovecote Road, Attleborough.
Letts, Miss B., Windmill, Houghton-on-the-Hill, near Leicester.
Williamson, J., Gairlochy, by Speanbridge, Inverness-shire.
Sewell, N., Old Scriven, Knaresbro', Yorkshire.
Oatev, S., Chacewater, Scorrier, S.O. Cornwall.
Thornton, B., North Bank P.F., Briercliffe, near Burnley, Lancs.
Pond, Miss D. M., Pine Grove, West Moors, Dorset.
Dalley, Mrs. M, The Cedars, Kidderminster.

KEIGHLEY AND DISTRICT BRANCH.

The prize distribution of the above Society of Cups, spoons and medals won in the Annual Open Utility Poultry Show on November 14th, 1925, and members' specials won in the Yorksire Federation Laying Test, 1924-25, took place in the Crotona Hall, Keighley, on Wednesday, December 2nd. The Hon. President, Mrs. M. E. Clay, kindly attended to make the presentations. The President, Mr. Frank Snowden, was in the chair.

The majority of members were present. A social evening followed the distribution of prizes, and a very merry evening was spent, Mr. Snowden, Mr. F. W. Smith, and Mr. Fisher entertaining the company. Their choice was a most happy one. Peals of laughter were evoked during the various items of recitations and impersonations.

Mr. S. Hartley won the prize given by Mr. F. W. Smith, for winner in the "Musical Chair" competitions.

The Hon. Secretary, Mrs. Wilson, had provided a R.I. Red cockerel for a guessing competition. Five competitors guessed the correct weight, and, all being in favour of the bird being set up for auction, the same was sold and resold until the sum of £2 8s. 6d. was realised, the proceeds of which were to go towards the show expenses.

LIVERPOOL AND DISTRICT BRANCH.

The December Monthly Lecture and Egg Show will be held at the headquarters of the branch, "The Albany Room," Palatine Cafe, Lord Street, Liverpool, at 6.30 p.m. prompt, on Saturday evening, 12th December, 1925.

Lecturer: Mr. Tom Newman. Subject: "The Intensive System."

Lecturer: Mr. E. J. Meeking. Subject: "What are the Prospects of Commercial Egg Farming?"

Egg Show.—4 Classes, White, Brown and Tinted Classes (4 eggs), and Plate Mixed Eggs (1 dozen, 4 each of white, brown, and tinted). Entrance fee, 6d. Judge: Mr. Tom Newman. All entries to be received by the Hon. Secretary by 6.25 p.m.

5/- Special each class, if 10 or more entries.

1st Class Certificate in each class.

2nd Class Certificate if six or more entries in each class.

All members of the S.P.B.A. who are not members of the Liverpool Branch are cordially invited to attend the above lecture.

R. J. THOMAS, 9, Grey Road, Walton, Liverpool.

BUCKS AGRICULTURAL COMMITTEE.

AGRICUTURAL INSTRUCTION AND GENERAL PURPOSES SUB-COMMITTEE.

BUCKS COUNTY EGG-LAYING TRIALS, 1925-26.

On October 8th and 9th the birds were received for our New Trials, and on this occasion we received an entry of 333 birds, but 9 were withdrawn, so we have 324 to carry on. With few exceptions they were a very nice lot, only about a score that were not matured. Unfortunately the change threw quite a third into a partial moult, but the majority of the others are laying. The special section for White Bresse are probably leading as a section, but, unfortunately, we have had three or four fail with prolapsus of the oviduct. We cannot account for this, as none of the birds are being fed with over-stimulating food. White Wyandottes are also doing well.

RESULTS TO END OF FIRST PERIOD.

Figures are Eggs and Points respectively:—

Section 1—Single Bird—Heavy Breed.—A. E. Ford (W.W.), 17, 187; W. A. & H. O. Blake (Aus.), 11, 88; A. L. Higby (R.I.R.), 10, 86; Mrs. L. Hiorns (W.W.), 9, 80; Mrs. N. S. Atkinson (Aus.), 3, 33; A. L. Higby (R.I.R.), 2, 18.

Section 2—Single Bird—Light Breed.—Captain Doyle (B.L.), 9, 81; Captain May (W.L.), 4, 32; A. L. Higby (W.L.), 3, 28; Mrs. Burges (W.W.), 2, 16.

Section 3—Three Birds—Heavy Breed.—Captain May (R.I.R.), 37, 404; E. W. Davis (W.W.), 30, 352; G. & T. Rowe (W.W.), 36, 351; P. G. Lewis (W.W.), 32, 262; Major Tubbs (W.W.), 25, 236; Captain C. E. May (W.W.), 23, 197.

Section 4—Three Birds—Light Breed.—A. E. Ford (B.L.), 23, 219; Captain Bewicke (W.L.), 21, 177; G. & T. Rowe (W.L.), 17, 168; P. G. Lewis (W.L.), 16, 135; G. W. Hampton (W.L.), 11, 100; B. Backhouse (B.L.), 4, 37.

Section 5—Five Birds—Heavy Breed.—A. E. Ford (R.I.R.), 36, 380; Major Kingscote (R.I.R.), 15, 164; H. S. Wood (W.W.), 13, 114; Major Kingscote (W.W.), 14, 112; Major Caldwell (W.W.), 9, 72.

Section 6—Five Birds—Light Breed.—Captain N. P. Doyle (W.L.), 28, 255; Major Kingscote (Anc.), 15, 126; Major Kingscote (W.L.), 10, 90; A. E. Ford (B.L.), 4, 34.

OPEN CLASSES.—Section 7—Three Birds—Heavy Breed.—A. E. Ford (W.W.), 47, 458; Haddon-Emeney (W.W.), 25, 269; Haddon-Emeney (R.I.R.), 27, 246; Major Tubbs (W.W.), 23, 218; H. Sidebottom (W.W.), 17, 173; H. W. Brightmore (W.W.), 12, 102.

Section 8—Three Birds—Light Breed.—J. A. Howarth (W.L.), 53, 487; Mrs. Greenslade (W.L.), 32, 321; Haddon-Emeney (W.L.), 13, 127; Sir C. McGrigor (B. La B.), 14, 125; A. E. Ford (W.L.), 7, 60; R. & W. Wickens (W.L.), 6, 52.

Australorps.—Mrs. Jackson, 22, 207; Mrs. Wienholt, 13, 140; J. J. Hetherington, 14, 136; H. Sidebottom, 8, 66; H. Sidebottom, 5, 45; Mrs. Hodges, 5, 40.

Pile Duckwing and Cuckoo Leghorns.—Standean P.F. (C.L.), 11, 97; Mrs. F. Bunker (D.L.), 5, 40; T. W. Swabey (P.L.), 1, 8; R. G. P. Nelson (P.L.), 1, 8.

White Bresse.—Mrs. Kingscote, 35, 332; Gerald Fox, 30, 308; Mrs. C. E. Parke, 28, 296; Sir C. McGregor, 23, 234; H. Binney, 23, 196; Mrs. Kingscote, 13, 106.

Some Fruit-Growing Notes

to help Poultry-Keepers.

By **F. W. WHEELER, F.R.H.S.**

FRUIT SHOWS.

Since my last notes were written for "Eggs," I spent a most enjoyable and profitable day in London at Holland Park Hall, where the Fifth Imperial Fruit Show was held this year. That these shows have a wider influence for good than simply helping the trade and the big fruit-growers is indisputable.

My readers will quickly realise what I mean, because they know the number of large and small poultry-keepers that flock to our big Poultry Shows, and they would not do that if they were not satisfied that it was worth the time and money so spent. I would strongly advise those interested in growing fruit, even on a small scale, to visit this very important annual Fruit Show, because besides the usual gains from such exhibitions, there are other exceedingly good features, or side shows, to give additional interest, at this leading industrial gathering; to mention just one or two. The East Malling Research Station arranged some practical pruning demonstrations. Trees were taken there specially to illustrate how the actual cutting should be done under the many varying conditions likely to be met with in orchard pruning work.

Even when one thinks that one knows a good deal about such a thing as pruning, it is surprising how much there is to be learnt from the latest results of experimental research, and this remark makes me think of an old Dutch proverb which is worth quoting for its quaintness in expressing a truth, and perhaps it may be a fresh one to some:—

"He who knows not, and knows not he knows not,
He is a fool, shun him.
He who knows not, and knows he knows not,
He is simple, teach him.
He who knows, and knows not he knows,
He is asleep, awake him.
He who knows, and knows he knows,
He is wise, follow him.

I want, in continuing my "Autumn Notes," to take up next the subject of Pruning, but before leaving the subject of shows should like to add that another fine feature at the Imperial Fruit Show was the arrangements made for the attendance of members of the staff from the Agricultural and Horticultural Colleges and Experimental Research Stations, who were there to advise and discuss difficulties likely to be met with in fruit growing. The stalls displaying a collection of diagrams, photos, and even plants in pots to illustrate the results of various investigations; (a) Exhibits dealing with the rate of growth of fruit trees as as affected by stock and scion relationships; (b) The action of potash in promoting root development; and (c) Its connection with leaf scorch troubles, were just three amongst many other exhibits.

Again pieces taken from diseased fruit trees were shown to illustrate the harm caused by certain pest and fungoid enemies which growers are up against. In connection with this last item I might say that the manufacturers' splendidly equipped stalls of the various "ready mixed" chemical sprays also added interest, besides giving one a fine opportunity of discussing with the makers the advantages of their own special mixtures.

An extract from a report of the Northampton County Fruit Shows gives food for thought:—"In declaring the show open, the Marquis of Northampton said the proportion of fruit imported was absurd. No country in the world could produce such apples as England, yet we grew only 3½ million cwts., compared with America's 30 million cwts. Fruit-growing could be very profitable. A Kettering grower made an average profit of £300 a year from two and a half acres, and a grower on the borders of his own estate made £1,000 a year from six acres of fruit trees. Side by side with these were men who complained they could not make a profit, but the only reason was that they would not learn." Is it not the same with poultry-keepers?

Now to return to Autumn Notes. PRUNING.—Probably it is not quite realised how many different objects are aimed at in pruning, so I think that they are worth summarising in order to impress their importance. Everyone with fruit trees will soon be saying. "Of course, I ought to prune my trees this winter"—and if you call on a friend and he takes you into his garden, he wants you to look at his trees, and he hopes you can easily explain in about ten minutes all that is necessary to be done. Naturally if they are newly-planted bushes, you can soon advise the little that is necessary, but if they are older trees, it is quite a different matter.

Let me just put forward a few points, all of which can be more fully dealt with, and perhaps I might give these extra details in some articles in the near future. Naturally all pruning leads to one main object, namely:—FRUIT, good saleable fruit; but to reach this end we must STUDY AND CONSIDER WHEN PRUNING:—

1. Age of trees.
2. When planted, before or after Christmas.
3. The development of the leaders.
4. The advantages of "tipping."
5. Short or long spurring of laterals.
6. When not to prune at all.
7. When to reduce the severity of pruning.
8. Whether trees are to be "permanent."
9. Or whether planted as "fillers."
10. When summer pruning is helpful
11. When fruit blossoms should be removed.
12. How near to bud cut should be made.

And PRUNE WITH THE OBJECT OF—

a. Checking a too vigorous wood growth.
b. Encouraging growth where too slow.
c. Shaping your trees to ideal fruiting forms.
d. Training trees as "espaliers," "fan," etc.
e. Cutting to counteract a too spreading
f. Or a too upright growth
g. Completely removing sappy wood
h. Thinning out the heads of trees.
i. Aiding quality of fruit by thinning "spurs."
k. Stopping branches from crossing and rubbing.
l. Removing all diseased and dead wood.
m. Having sturdy limbs to carry good fruit.
n. Increasing the number of "leaders."

From all this it will easily be seen that I cannot today enter into the "how, when, and why," for I wan the Editor to allow me yet a little more space to add a further reply to "CORNWALL'S" queries, r FIGS:—You will find in "The Journal of the Ministry of Agriculture" (6d.) for March, 1924, a most interesting article on "Fig Cultivation." It was only while a Holland Park Show I saw it myself. *Re* RHUBARB: "On reading over my reply I fear I may not have expressed myself clearly. The 'Nitrate of Soda' i best used alone when new growth is starting, but i the chemicals are applied as a mixture, use Sulphate of Ammonia with Superphosphates instead of Nitrate of Soda."

REPORT OF SEVENTH MIDLAND LAYING TEST.

SYSTEM OF FEEDING AND MANAGEMENT.

End of First Month (28 Days).

The Seventh Midland Laying Test is made up of 315 birds composed as follows:—75 White Leghorns, 90 White Wyandottes 65 Rhode Island Reds, 25 Light Sussex, 20 any other variety breeds and 40 single birds. The total number of eggs produced durin the 28 days—November 2nd to the 29th, inclusive, totalled 2,99 eggs. out of the 315 pullets entered for competition. Only 30 birds had commenced to lay up to the 28th day, so that thi number of birds will be seen to have produced nearly 3,00 eggs, or an average of 10 eggs per bird, equivalent of approximately 35 per cent. production per day throughout the whol period. The lowest day's production was 42 eggs, equivalent t 14 per cent. of the flock in lay. while the highest day's production was 182 eggs from the 300 birds, equivalent to 62 per cent production. On the whole it may be said to be an outstandin performance, considering the severe cold and wintry weather t which the birds have been subjected for almost three weeks.

The great and even grave difficulty the management hav had to encounter during the long frosty periods, has been th water problem. To keep a supply of fresh clean water in fron of them the whole of the time, has called for considerable though and ingenuity on the part of Mr. Bayliss, the manager, and hi staff who are to be congratulated on overcoming to a larg degree the thing which is not only a discomfort to the hen. bu of vital importance, for if the water supply of the laying hen i restricted to any degree, egg production begins to wane immediately. Readers will understand what a difficulty this has been when one realises that when clean water has been added to th troughs on many days, less than half-an-hour later it has bee frozen over. This has meant that constant supplies of fresh heated water has had to be constantly given, calling for almos continuous filling up, to try and overcome this difficulty. Th first week's production totalled 407 eggs, giving an average of 1. eggs per bird. Production at the end of the second week was 68 eggs, or 2.2 eggs per bird; at the end of the third week the tota on week's laying performance was 906, equivalent to three egg per bird. On Sunday last, the 29th day, the end of the fourt week, the 300 birds produced 1,005 eggs, or an average of 3.3 egg per bird—truly a commendable performance when one bears i mind the exceptional harshness of the weather during last week It is interesting to record for purposes of comparison what th production per each section was, namely, the 75 White Leghorn produced 76 eggs, averaging 10.13, 90 White Wyandottes produce 1,063 eggs, an average of 11.8; 65 Rhode Island Reds produced 63 eggs, an average of 9.6 eggs; 25 Light Sussex produced 161 egg an average of 6.4 eggs.; 20 birds in any other variety produce 283 eggs, an average of 7.07 eggs Yesterday, before this repor was written production reach 192 eggs, a nearly 66 per cen production.

In the White Leghorn section the owners of the leading pen are as follows:—Miss Birch (Wolverhampton), whose pen of Whi Leghorns laid respectively 17, 18, 17, 15 eggs. totalling 67 egg whose score value for sale purposes amounted to £1 0s. 10¾ Position 2 is occupied by Mr. Wilson Beattie (Northampton whose pen of White Leghorns laid 15, 11, 12, 20, totalling 58 egg score value 18s. 0½d. The third position being taken by Viscoun tess Cotham (Alvechurch), whose pen of bird laid 6; 11, 11, 11, 1 totalling 40 eggs, value 12s 5¾d

In the White Wyandotte section the owners of the leading pen are as follows—Mrs. Seed (Longbridge), whose pen of Whit whose birds laid 22, 14, 17, 16, totalling 69 eggs. score valu £1 2s. 1¾d. Position 2. occupied by Rev. Blight (Chard whose birds laid 22. 14, 17. 16. totalling 69 eggs, score valu £1 1s 6¾d.; the third position being taken by Mrs Jackson (Pe shore), whose pen of birds laid 13, 18, 18, 15, making a total of eggs, score value, 19s. 11d.

(Continued at Foot of Column Next Page).

MARKET REPORT.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, DECEMBER 4th, 1925.

GRAIN AND FEEDING STUFFS.—British wheat continues to sell readily and quotations have advanced by about 6d. per cwt. Imported wheat supplies are limited and prices have hardened. Business remains quiet for both English malting and grinding barleys, the former selling at recent figures, but grinding sorts are reduced at Bristol. Supplies of homegrown and foreign oats are on the short side, and business is steady with a firmer tendency in prices. The demand for maize has fallen off a little at Bristol, but elsewhere sales are fairly ready at fully recent rates.

Millers' offals experience a good inquiry and quotations have advanced. Bran now averages nearly £8 5s. per ton, against £7 17s. last week, while coarse middlings average fully £8 17s. Maize products continue to harden in price, while other meals sell at recent figures. Linseed cakes are dearer at Bristol and Liverpool, but cottons generally realise rather less money.

MILLERS' OFFALS.—Bran (British): Bristol, £8 15s; Hull, £7 17s; Liverpool, £8 5s. London, £8 2s. Broad Bran: Hull, £9 7s; London, £8 17s. Middlings—Fine (Imported): London, £9; Coarse (British): Bristol, £9 7s; Hull, £9; Liverpool, £9; London, £8 2s. Pollards (Imported): Bristol, £7 15s; Hull, £6 15s; Liverpool, £6 10s; London, £6 17s. Rice Bran: Bristol, £7 10s; Liverpool, £7 2s. MEAL.—Barley Meal: Bristol, £9 15s; Hull, £9 12s; London, £10. Maize Meal: Bristol, £11 5s; Hull, £10; Liverpool, £10 5s; London, £10. Maize Meal (S. African): Bristol, £9 12s; Hull, £8 10s; Liverpool, £8 12s; London, £8 17s. Maize Germ Meal: Hull, £10; London, £9 10s. Maize Gluten Feed: Bristol, £11; London, £9 12s. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 10s; London, £9 12s. Bean Meal: Hull, £11 8s; London, £12 5s. Fish Meal: Bristol, £21 10s; Hull, £20 10s; Liverpool, £20; London, £20.

EGGS AND DEAD POULTRY.

Supplies of best eggs are still very scarce, but the high prices ruling are checking the demand, and, although some descriptions are quotably dearer, the tone of the market at the close is easier. Dead poultry are plentiful, but values are little altered. Turkeys are now arriving in fairly large quantities, but there is, as yet, little business of importance.

Week-end Prices—Eggs (per 120): British, 35s 0d; Irish, 33s 3d, 31s 3d; Danish, 35s 0d, 33s 6d; Dutch, 33s 6d, 32s 0d; French (brown), 33s 0d, 31s 0d; French (mixed), 29s 0d, 26s 0d; Belgian, 32s 0d, 30s 0d; Italian, 27s 0d, 25s 0d; Lithuanian, 19s 6d, 17s 6d; Polish, 17s 0d, 15s 6d; Chinese, 15s 6d, 14s 9d; Russian, 18s 0d, 14s 6d; Canadian, 21s 0d, 20s 0d; Australian, 26s 0d, 24s 0d; South African, 22s 0d, 20s 6d; Styrian, 20s 0d, 19s 0d; Argentine, 17s 0d, 16s 0d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 5d, 1s 2d; Irish, 1s 2d, 1s 0d; Others, 1s 3d, 1s 0d. Ducks, 1s 2d, 1s 0d. Geese, 1s 0d, 10d. Turkeys, 1s 5d, 1s 2d.

EGGS.

Per Doz.—Ashford: First, 3s 2½d; Second, 3s 0d. Birmingham: First, 3s 6d; Second, 3s 2½d. Bridgwater: First, 3s 6d; Second, 3s 1d. Chelmsford: First, 3s 8½d; Second, 3s 3½d. Colchester: First, 3s 7¼d; Second, 3s 1¾d. Doncaster: First, 4s 0d; Second, 3s 10d. Dorchester: First, 3s 2½d; Second, 3s 0d. Exeter: First, 3s 6d. Hereford: First, 3s 0d. King's Lynn: First, 3s 4d; Second, 3s 0d. Llandilo: First, 4s 0d; Second, 3s 9d. Mold: First, 3s 9d; Second, 3s 6d. Newport (Mon.): First, 3s 6d; Second, 3s 3d. Norwich: First, 3s 5d; Second, 3s 0d. Oswestry: First, 3s 6d. Penzance: First, 2s 10d; Second, 2s 9d. Saffron Walden: First, 3s 7¼d; Second, 3s 0d. St. Ives (Hunts): First, 3s 5d; Second, 3s 3d. Salisbury: First, 3s 3d: Second, 3s 1d. Skipton: First, 3s 8d. Truro: First, 2s 10d. Welshpool: First, 3s 9d; Second, 3s 6d. *Carlisle: First, 3s 9d. *Derby: First, 3s 6d. *Ipswich: First, 3s 9d; Second, 3s 6d. *Lincoln: First, 3s 6d. *Shrewsbury: First, 3s 6d; Second, 3s 3d. *York: First, 3s 8d; Second, 3s 7d.

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 9d. Doncaster: First, †5s 3d; Second, †4s 9d. Exeter: First, 1s 3d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 7d; Second, 1s 4d. Newport (Mon.): First, 1s 6d; Second, 1s 2d. Truro: First, 1s 4d. Welshpool: First, 1s 6d; Second, 1s 4d. *Derby: First, †5s 6d; Second, †4s 0d. *Ipswich: First, 1s 5d; Second, 1s 4d. *Lincoln: First, †5s 6d; Second, †4s 0d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: First, †4s 6d; Second, †4s 0d.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: First, †6s 0d; Second, †5s 0d. Exeter: First, 1s 2d. Hereford: First, 1s 2d. Second, 1s 0d. Llandilo: First, 1s 7d; Second, 1s 4d. Welshpool: First, 1s 5d; Second, 1s 3d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 4d. *Shrewsbury: First, 1s 6d; Second, 1s 4d. *York: First, †5s 6d; Second, †4s 6d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, December 9th, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months. 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches. Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick. Sussex

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 994.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of "Eggs," it is imperative that new advertisements and alterations are received by FIRST POST ON FRIDAY MORNING to ensure insertion in the following Wednesday's issue. It is hardly necessary to add that the earlier in the week we receive copy the better it is for everyone concerned.

Classified Advertisement Rates will be found at top of first page of classified advertisements.

PROOFS.—We cannot guarantee to submit proofs unless complete copy is to hand by FIRST POST ON THE MONDAY PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISSUE.

In the Rhode Island Red Section the owner of the leading pen is as follows.—Miss Gibson (Wolverhampton), whose pen of Rhode Island Reds laid 15, 18, 11, 16, totalling 60 eggs, score value 18s. 9d. Position 2, occupied by F. and T. Lumb, whose birds laid 10. 16, 17, 15, totalling 58 eggs, score value 18s.; the third position being taken by Capt Corce (Wimborne), whose pen of birds laid 17, 15, 11. 13, totalling 56 eggs, score value 17s. 6d. L. A. Cooper, Scootherley) has also claimed the third position, whose birds laid 14, 16, 16, 10, totalling also 56 eggs, score value 17s. 6d.

In the Light Sussex Section the owner of the leading pens are as follows:—F. R. Welch (Bewdley), whose pen of birds laid 9, 14, 7, 1, totalling 31 eggs in all, score value 9s. 7¾d. Position 2 being occupied by Capt Munroe Spencer, whose birds laid 3, 6, 9, 12, totalling 30 eggs, score value 9s. 4½d.; the third place being taken by Viscountess Cobham, whose pen of birds laid 12, 10, 6, totalling 28 eggs, score value in 8s. 8¾d.

In the Single Bird Light Breed Section, the owner of the leading pens is as follows:—P. Lawe (Lowestoft), whose bird laid 14 eggs, score value 4s. 4½d. The second position is occupied by Mr H Armitage, whose bird laid 13 eggs, score value 4s. 0½d: the third position being taken by Mr. B. Allbutt (Bromsgrove), whose bird laid 11 eggs, score value 3s 5½d.

In the Single Birds of any breed, the owner of the leading birds is as follows:—Mr. F. Nicholls (Alvechurch), whose bird laid 16 eggs, score value 5s.; the second position being occupied by Mr. C. W. Cracknell, whose bird laid 15 eggs, score value 4s 8¼d The third position is claimed by Mr. H Bennett (Stroud), whose bird laid 15 eggs, score value 4s. 8d.

It is interesting to note that the three highest individual scores, namely, two of 22 eggs each, and another of 21, were set up by two Wyandottes, while a White Leghorn laid 20 eggs for the same period of 28 days.

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FIRST POST FRIDAYS

for insertion in the following Wednesday's issue. Those received after this time will be inserted in the next issue.

PLEASE WRITE CLEARLY, and TO AVOID MISPRINTING OF STRAINS, NAMES AND ADDRESSES, THESE SHOULD BE WRITTEN IN PRINTED CHARACTERS.

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Ordinary Page, £8 15s. 6d.; Half Page, £4 7s. 9d.; Quarter Page, £2 5s. 0d.; One Column, £2 18s. 6d.; Half Column, £1 9s. 3d.; Quarter Column, 14s. 9d. One inch, 6s. 6d. Special Inside Pages, 25 per cent. on above rates. Cover and other Special Positions by arrangement. Discounts for Series. Full Scale of Advertising Rates on application.

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A DEPOSIT SYSTEM has been adopted for advertisements, and Advertisers are asked to make full use of same. When remitting direct to the Editor on deposit, the full amount of purchase money should be sent, and six penny stamps extra to cover cost of acknowledgment of same. Cheques should be made payable to the Editor, and sent direct to The Beeches, Rudgwick, Sussex.

EGGS.

FOR SALE.

ALEX. J. BELL, M.S.P.B.A., U.D.C.,
Longwick P.F., Princes Risborough, Bucks R.I. Reds, Runner and Khaki-Campbell Ducks. Eggs, Chicks and Stock Birds. List free. Satisfaction insisted on.

Eggs for hatching. Rothschild's Light Sussex, Cam's White Wyandottes, Measures' Rhode Islands, Schimnel's Barnevelders, Hunter's Black Leghorns, Barron's White Leghorns; all direct strains; 6s. dozen; 45s., 100, by return, carriage paid. — Mrs. Porter, Dishley Grange, near Loughborough.

White Sussex Eggs booked for delivery end of January; £1 for 15; £3 for 50. — Raine, Headcorn

Black Leghorn and White Leghorn Eggs, from my birds which won Silver Medal, Harper - Adams'; Silver Medal, L.U.P.S.; Bronze Medal, "Feathered World": and 16 Certificates in the last two competitions, 21s. and 12s. 6d. per dozen, including records of 244, 252, 238, and 246 in 48 weeks; mated to cockerels from 244, 233, and 320 egg hens. Compare these prices and records with other advertisers. Orders now being booked. Eggs now ready from the best strains of R.I.R and White Wyandottes. Every bird bred from competition winners. Special prices to hatcheries. — Hodkinson, Holywell, Huntingdonshire.

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Light Sussex Eggs from wonderful winter layers, on free range; hatching vigorous, hardy chicks; 6s. dozen—H. de Winton, Abbot's Lodge, Gloucester.

PROFITABLE SPRING CHICKENS.
Reliable Hatching Eggs from big-framed birds. Rhode Island x Light Sussex Cross. 6s. per dozen; 45s. per 100.—Peretone Poultry Farm, Churt, Surrey.

Capt. BARNES, KENILWORTH,
Light Sussex or R.I.R. Eggs rom big-framed birds; 45s., 100; 24s., 50; 7s., 15. Now ready or for later delivery. Also Black and White Leghorns

EGGS FOR SPRING CHICKENS.
Dr. Harbord (winner, 1st Bath and West, Table Fowl) is now booking orders for delivery. October onwards; £3 per 100; 7s. 6d. for 15. No replacements. From his Special Light Sussex and R.I.R. Pens; noted for stamina, size and quality.—Detling, Maidstone.

Dr. Harbord will be obliged if orders for Hatching Eggs are given well in advance. With present requests, exceeding occasionally a thousand eggs daily, it is impossible to give prompt delivery.

EGGS AND CHICKS.

FOR SALE.

LA BRESSE.
Orders now being booked. Whites, 10s. per sitting. Chicks double.—Hemelryk, Old Mill House, Partridge Green.

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Orders now being booked. Wheatens, 12s. and 16s. Buffs, Blacks or Whites, 12s. per sitting. Chicks double.—Hemelryk, Old Mill House, Partridge Green

TABLE POULTRY.
Eggs from Special Table Crosses, for producing highest class Spring Chickens; 7s. 6d. dozen: £3, 100 Unfertiles replaced. — Simmins, M.S.P.B.A., Heathfield, Sussex. Established 1911

EGGS AND CHICKS.

FOR SALE.

Cook's 270-egg strain; winter la
R.I.R Eggs, 7s 6d doz ; 60s , 100. Sa
Faverolles Eggs, 12s. 6d. and 21s. d
Also Chicks.—Simmins M.S.P.B.A., H
field, Sussex

Light Sussex Eggs; 100, 40s.; 50, 20s.
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Eggs, 6s. dozen; Chicks to order.
erels, 12s.; Pullets, 15s dozen. Also R.
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Sittings from Hens, 2¼-2½ozs.; Sittings
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ready of eggs from individual hens.
lets (February-April) for laying; 12s. 6
F. K. MAXTED, TEYNHAM, KEN

EGGS FOR SPRING CHICKEN
2oz. Eggs from big-framed Light Su
45s, 100 — Major Disney-Roebuck,
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Brown Leghorn-Light Sussex and R
Island Red-White Wyandottes. Eggs,
15. Chicks, Pullets, 21s. dozen; Cock
12s. 6d.—Roberts, Broughton Poultry F
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GOLD MEDAL STRAIN.
WHITE LEGHORNS.
Winners of National Laying Test, Se
2, 1925. Booking sitting of eggs, 15s. d
Pullets, Cockerels, from 12s. 6d eac
Bingley, Balsham Manor Farm, Cambr

SPRING CHICKS!
SPRING CHICKS!
Thousands of Fertile Eggs available
large-framed Light Sussex; 50s., 100; £1
500; £21 5s., 1,000. Assorted Sussex,
Red, Buff Orp., White Wyandotte,
Barred Rock eggs; 45s , 100; £10, 500;
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cent. fertility guaranteed. Order now
fore the rush. Eggs ready now, or
be despatched on dates specified if bo
in time. Day-Old Chicks available
January. May we quote you for you
quirements? We have a flock of ne
5,000 hardy, healthy birds. Send for I
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EASTMAN BROS.,
SUFFOLK POULTRY FARM,
HADLEIGH.

PULLETS.

FOR SALE.

We continue to receive repeat order
Pullets. Further enquiries invited.—
and Bacon, Arle Poultry Farm, Che
ham.

Light Sussex Pullets, bred from
with trap-nested records between 200
252; every egg incubated weighed over
Five months, 9s.; Six months, 11s.; S
month, 12s. 6d. White Wyandottes, W
Leghorns, Rhodes and Anconas for se
Miss Brown, Hamstalls, Newnham, Glo
tershire.

GRAND TYPE
WHITE WYANDOTTES
(Gunn-Wharton), bred from high-re
trap-nested, prize-winning parents.
BUFF ROCKS
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hatched; laying or on point. Price 11s
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COXE,
Long Coppice Lodge, Canford, Wimbo

EGGS
THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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Edited by TOM NEWMAN.
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Twelve Months Post Free 12/8
Six Months ,, ,, 6/4
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Extensible Unit Buildings.

Three Type L All-Purpose Houses, each 50ft. by 15ft., accommodating 200 pullets each; houses erected on oak stakes on very steep ground. All equipped with guttering, water tanks, and sliding doors. Owner: Major H. C. Few, Drayton Lodge, Ninfield, Battle, Sussex.

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For many years we have been supplying best quality Poultry Foods at reasonable prices, knowing from experience that the Poultry Farmer must buy right if his farm is to pay him. We specialise in Poultry Mixtures, Mashes, Sussex Ground Oats, and Clipped Oats, but we deal in practically every variety of Poultry Food, and shall be pleased to quote for any quantity from 1 cwt. upwards, free on rail Wallington Station. Please state your requirements, and we shall do our best to satisfy you.

R. E. JOHNSON & SON,
Corn, Forage and Seed Merchants,
POUND STREET, CARSHALTON.
'Phone:—SUTTON 1279.

LIGHT SUSSEX COCKERELS

Early hatched from individually recorded non-broody Hens!

The "HEYDOWN" STRAIN of Light Sussex will be found to combine the incomparable table qualities of the breed with unusually High Egg Production.

JOHN H. DOWDEN & SON,
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The 'Eclipse' Poultry Houses

Manufactured by a PRACTICAL POULTRY FARMER.

A No. 8 (Three Section) supplied to and used intensively by Mr. G. Calthrop, Junr., Normans, Wells, Norfolk,

SATISFACTORY VENTILATION IS PROVED BY RESULTS, NOT BY THEORY ONLY.

Our own experience over a period of nearly 10 years with "Eclipse" Houses has been absolute immunity from colds, roup, or kindred ailments amongst the stock so housed.

This we believe would also be the testimony of all our customers. With these houses FLOOR VENTILATION is not necessary, but is provided for and obtained when desired by the simple adjustment of window buttons.

Fullest enquiries and inspection invited.

HERBERT W. MARTIN, PERIVALE POULTRY FARM & APPLIANCE WORKS,
EAST HARLING, NORFOLK.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, DECEMBER 16th, 1925.

Editorial.

BREEDING FOR PRODUCTION.

This paper was read before the Scottish National Poultry Council at Edinburgh on December 5th.

Breeding for production is a big subject to deal with in the course of a short paper, and it will be wise to approach it by recognising a few fundamental facts :—

(1) The individual possesses **all** the characters of his race in a greater or lesser degree.

(2) It is the individual that counts.

(3) Selection is the basis of all improvement; it must be based on the desired characters which are most strongly developed in the individual.

(4) Selection for a specific character is always more or less opposed to characters of equal importance.

(5) Fecundity is racial. This is, all hens lay eggs, more or less.

(6) High fecundity is individual. It is the full expression of the character—fecundity.

(7) All hens are hatched with the same number of ovulas or potential eggs.

These are facts. Now I am going to put you is a proposition, and not as a fact, that high ecundity is not inherited, that a hen does not ransmit high fecundity through her sons. All hat she transmits is the constitution, which pernits the full expression of the character fecundity. his I know is rank heresy. But we are not here o repeat platitudes, and if I am wrong it does not natter.

If we are to raise the average, obviously we annot breed from the average, but must select ndividuals which are well above it.

It must be admitted that in breeding for heavy gg production we have to some extent lost sight f the all-important question of reproduction, so hat before we consider any system of breeding e should have some idea of the object in view. n other words, the characters for which we ntend to breed. We are only to consider the conomic characters, which may be defined as :—

(1) Constitutional vigour.
(2) Size—medium for the breed.
(3) Fecundity.
(4) Early maturity.

Taking these in their order. We know that constitutional vigour is fundamentally a matter of inheritance. Weakened parents give weakened offspring, low in vigour and of poor productive powers. Anything which weakens the parent constitutionally will detrimentally affect the constitution of its descendants. We must have size, and the medium-sized bird is best suited to our requirements. Now may we discuss these two points together and their relation to heavy egg production. As has been stated, selection for a specific purpose is always more or less opposed to characters of equal importance. It is quite unnecessary for me to tell you, that as a direct result of selection for heavy egg production, our egg-producing breeds have lost size; indeed, sarcastic people have said that we have "bantamised" them, and we had better admit it. We have lost constitutional vigour to a very serious extent. This has been attributed to in-breeding and to over-production. I am confident that in-breeding has played very little part in the trouble. As to over-production, the term is a little vague. What is actually meant by it? Presumably we mean the reproductive organs function too rapidly, and at the expense of bodily vigour. Such cases, in my experience, are extremely rare. We must look elsewhere for the real cause of the trouble.

First, it must be clearly understood that continuous selection for high fecundity invariably results in an earlier sexual maturity—that is to say, that as by selection we increase production in successive generations, each generation sees the pullet laying her first egg at an earlier age, until we have Leghorns laying at 4½ months and Wyandottes at 5 months. Here we see selection for a specific factor pushed to an extreme. To a point, early maturity is economic; beyond that point it spells the ruin of a strain. It results in decreased body size; the eggs become smaller because the reproductive organs can only develop with the body; there is lack of vigour, and greater susceptibility to disease, because the food which should be used for the nourishment of the body and the development of the frame is partially diverted and turned into eggs, so that there is under-nourishment, barely enough for maintenance, much less for development. If breeders would but resist the temptation to breed from these precocious pullets we should not have to complain of lack of size, loss of vigour, and it would be one step on the way to the solution of the small-egg problem.

If we take two Wyandotte hens, each with a full year's record of 250— "A." lays her first egg at between 150 and 160 days old, "B." between 200 and 210 days old. We shall see a marked difference between them. "A." in 90 cases out of 100 will be a small bird—very fine in bone, possessing the flexible pelvic bones, beloved by judges at utility shows, and she will lay small eggs. As a breeder she is worthless; her eggs will hatch badly, her chicks will be weakly, and bad to rear. Her fine bone she owes to the fact that the lime intended to build up frame has been lost through the eggs she has produced. "B.," on the contrary, will be a larger bird with bigger, but not coarse, bone; she has not fully developed sexually before her body has developed, and under normal conditions she will be an ideal hen for the breeding pen. It is a grave mistake to believe that prolificacy is opposed to size, and equally a mistake to believe that size is opposed to prolificacy. In the Laying Trial just completed in Northern Ireland a Light Sussex pullet, weighing 7½ lbs., laid 262 eggs in the 48 weeks, and was still laying at the end of the Test. We know that a slow-maturing bird is almost invariably a poor producer, and usually attains great size. Our exhibition Wyandottes are an example, but we do not want great size, which is uneconomic. We need a medium size, and if we select such birds for breeders we shall have no great difficulty; but we must scrap these precocious pullets at all costs.

Now we come to the question of Selection on Performance—the actual production. It is not as simple as it looks. The S.P.B.A. standard is 40 eggs or more for any 90 consecutive days between 15th October and the 31st January, as a winter record, and 180 eggs as the minimum production for the year.

Not every pullet which puts up a record of 40 or more eggs during the winter months, or 180 during the full year, is suitable for the breeding pen.

High fecundity is linked with early maturity, and that is a factor to which we must give full consideration.

As an example, let us compare two Wyandottes, both hatched in March. One starts to lay on the 15th October, when exactly 6½ months old, and will lay, say, 50 eggs in the prescribed period. The other does not start to lay until the last day in November, and lays 45 eggs before January 31st, which just complies with the Test. Now, there is no comparison between these two birds as breeders. The late-maturing bird would be found to be in all probability very broody, and in 90 per cent. of the cases would drop into an early moult, while the other may be fairly well relied upon to put up a record of somewhere round about 200 eggs, and would, if properly mated, breed good pullets.

Personally, I would much prefer to take a bird's record for the first six weeks of her laying career, commencing 1st or 15th October. If during that period she laid 22 or more eggs, and was satisfactory in every other respect, she is

(Continued at Foot of Next Column).

the bird which I would favour for the breedin pen.

With regard to the cockerel, he should be fro a dam who should give at least 60 eggs for th winter months and not less than 240 for the yea of an average weight of 2¼ ozs.

(To be Continued.)

Modern Poultry Feeding.

By TOM NEWMAN.

If there is one point in connection with th feeding of poultry on which we shall most cer tainly have to modify our views, it will be wit the feeding of animal protein. Time was whe it was believed that a very high percentage o animal food was necessary for egg production an development; we have had the "awful example of the failure of chicks to develop which were no given animal food. I remember at The Hague four years ago, a chart representing chicks whic had been given animal food, and some which ha not. The bright healthy appearance of th former, and the dejected look of the latter, pos sibly impressed themselves on the memory of a the delegates to the Congress. There was on important omission in the argument. An endeavou had been made to bring up the albuminoid conten of the dejected's mash to equal that containin the animal food, with the result that a most in digestible composition had been given, and th chicks were suffering badly from indigestion, an not from the lack of animal protein. Our exper ments at Wellingham have demonstrated tha really excellent results can be obtained when minimum quantity of animal food is fed. Fo example, in the rearing experiment this spring when such wonderful results were obtained, th only animal food given was the five per cent. drie milk, and in the experiments two years ago, wit soya bean meal, the best results were obtaine with this when less than three per cent. of fis meal was used in the total ration, and a very hig (unnecessarily high) percentage of soya bean mea was used. Moreover, the latter pen finished i far better condition than the pen with 12 per cen fish meal, the conditions in every other respe being the same. This test was carried out to se whether we could obtain as good results with minimum amount of animal food if it were suppl mented by a good vegetable protein, and it demo strated that we could. For years we have estimate the value of a meat or fish meal by its prote content, and generally paid a high price for an thing above 50 per cent., have used a small percentage of blood meal and paid more for i because it carried 80 per cent. albuminoids. No we shall probably modify our views, and estima that a good sample of meat and bone meal at, sa 15/- per cwt. will give better results than a san le of pure meat meal with 60 per cent. albu- ninoids, sold at anything from 25/- to 30/-. It neans cheaper feeding, and that is a matter of great importance to the industry. We have come o the actual test now, and are not basing our eeding on the albuminoid content, or the food inits, which I have pointed out so many times ire not a reliable indication of food values. We ire beginning to realise that the mineral salts are of greater value than animal protein, and it is iere that we may look to the explanation of the act that milk is of so much greater value to oung stock than to adult. Our observation has ieen, that while it is of the greatest value to young hicks, we can get nothing like the same results with chicks over three months old. It has also ieen observed that it will give better hatching esults, and healthier and more vigorous chicks han any form of animal protein. This we must iscribe to the ash content, and not to the vitamin or protein. Perhaps on the S.P.B.A. experimental arm we may be able to do some good work in this lirection.

I have received a letter from N. Wales, in which he writer says that from 147 Wyandotte and Leg- iorn pullets he is getting but 50 eggs a day, and rom 89 second year birds but three eggs a day. His mash, which is fed in a crumbly moist con- lition, is as follows (parts are by measure):— Thirds 5 parts, bran 1, S.G.O. 1, meat and bone 1, ilfalfa 1, biscuit dust 1, with an occasional maize neal 1. The formula was given him by a well- nown Lancashire breeder. The birds only peck over the mash and leave it. Samples were sent ne, and are of excellent quality, but prices are nigh—Alfalfa meal at 18/- and meat and bone neal 22/6. A sample of dried yeast was also ncluded at 27/6. This was very unsatisfactory, s it was heavily adulterated with cereals, and vas not worth half the money. There was nothing n the samples sent me to indicate why the pullets lo not eat the mash. Now my correspondent asks ne to give him a cheaper and better formula, but here is nothing wrong with this. It would pro- luce eggs if the birds would eat it, and I cannot ee why they should not eat it. He certainly night cheapen it by omitting the alfalfa, as the owls have kale and lettuce, and there is abundant rass. The only suggestion that I would make s, that he increases the thirds by one part and eplaces the biscuit meal with flaked maize, such s Kossitos or Uveco, and adds a little salt to the nash. I cannot promise any definite results from his, but it is worth trying. He must take care f the second season birds, or he may easily get hem in an over-fat condition now that they are ot laying.

Another correspondent writes to say he is get- ing no eggs from Black Leghorns. The mash in his case is made of :—Bran 2 parts, middlings 4, naize meal 1½, ground oats a half part, and fish neal 1 part. When we come down to brass tacks ve find the birds are in an open-fronted house with corrugated iron roof, and I have no doubt this explains the scarcity of eggs. Such a house would be bitterly cold this weather, and unless my correspondent takes some steps to alter this he will not get many eggs however he feeds. It does not always follow that the failure to get eggs is due to the feeding. There are often conditions which will make it impossible for the birds to produce eggs however well they may be fed, and the novice does not always understand this, and others sometimes forget it.

Another complains of thin-shelled and shell-less eggs. He is using cockle shell, and thinks this is the possible cause. I cannot agree. He does not send me particulars of his feeding, but I suspect this to be of too stimulating a nature, but would not suggest any alteration unless these eggs are being laid by several birds, as often a highly productive pullet will lay thin-shelled eggs, and to change the mash might have a bad effect on the flock.

BARROW AND DISTRICT U.P.S. EGG-LAYING COMPETITION.

The single bird laying test organised by the Barrow-in-Furness and District Utility Poultry Society, and conducted by Mr. G B. Tootall at Thorncliffe Poultry Farm, Barrow-in-Furness, has just completed the second period of four weeks. Mr. Tootall reports a satisfactory increase of egg production over last month, though there are a number of birds in partial moult. All the birds are in excellent health. Considering the severe weather just now, and the consequent poor feeding quality of grass, it has been deemed advisable to add alfalfa meal to the mash. Figures are Eggs and Points respectively.

OPEN CLASSES.

Class 1. White Wyandottes.—Hon. M. Cross, 21, 226; Mr. T. B. Grice, 16, 172; Mr. G. Atkinson, 15, 164.

Class 2. White Leghorns.—Mr. A. Fawcett, 20, 240; Mr. J. Tyldesley, 16, 190; Mr. D. Lazonby, 13, 148.

Class 3. Any Other Variety (Heavy).—Mr. W. Howarth (R.I.R.), 19, 216; Mr. M. Newton (L.S.), 21, 214; Hon. M. Cross (L.S.), 17, 193.

Class 4. Any Other Variety (Light).—Hon. M. Cross (An.), 21, 250; Mr. M. Newton (B.L.), 13, 112; Mr. Newton (W.O.E. Ph.), 4, 48.

SMALL BREEDERS' CLASSES

Class 5. Any Variety (Heavy).—Mr. J. Graham (W.W.), 21, 204; Mr S. Wilkinson (W.W.), 15, 144; Miss M. Newton (W.W.), 10, 116.

Class 6. Any Variety (Light).—Miss M. Newton (W.L.), 22, 248; Mr. W E. Fearn (W.L.), 12, 120; Mr. P. W. Davies (B.L.), 10, 120.

MEMBERSHIP OF THE S.P.B A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, or farmers on a large scale to render themselves eligible for membership of the S.P.B.A This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year began on 1st September.

The "All-Purpose" System of Brooding and Rearing.

By MAJOR W. HAYLAND WILSON.

Continued from Page 386. (Copyright.)

Keep on building up your litter as the chicks grow older. Mind, an inch of litter may be enough to start them on their scratching career, but keep on building up, at the rate of half a sack of chaff a time, say, every three days or so—until at a month old they've nearer the four or five inches to keep them busy. I've taken up my wire on the second or third day, according to the weather (if it's particularly bleak and cold, I keep them possibly behind the wire even over the third day). Again, the chicks themselves will tell you—watch their behaviour, if they want to get outside the wire they'll be romping round it telling you so—in fact, if you watch your chicks, there's nothing they won't tell you.

About the sixth or seventh day they'll start hopping over the foot-high boards. Start getting the second ten feet of the compartment ready. Half an inch of dampish sand again, and a thick layer of chaff—up with the rear boarding at the mid-day feed, scatter a measure of feed for them on the new side, and tap them across—and round they'll all come, and from then on you'll gradually knock off feeding them on the stove side, which becomes the night-nursery, and you'll stick to feeding only on the fresh side. Every day from the start I give the litter a good raking on the stove side, particularly round under the stove, and, given this raking, I don't find it necessary to start actually taking away any litter until round about the third week, as the tiny droppings are naturally dried out under the hover, and, providing the chicks are healthy, can do no possible harm. After the third week, however, you'll begin to find it necessary to skim. A little away every day is my motto, and the stale and dirty litter taken away (put it on your strawberry beds!) is gradually replaced with comparatively clean litter, raked across from the feeding side, so that the feeding side may be constantly freshened up with entirely clean chaff. This goes on until the pullets are finally perching, when the stove is dismantled and stored away until the following season, and the chaff litter, which has thus never been allowed to grow stale and fusty, is covered with a truss or two of whole straw.

The cockerels from *both* the hatches at either end of the house have meantime been weeded out, at anything from the five weeks old stage, into the middle twenty foot square compartment, which has its own twenty foot square run wired in at the back of the house. As these young cockerels arrive at the 10-12 weeks old stage they ar
gradually drafted off—the majority as "Poussins"
to Leadenhall; any particularly promising young
sters—not more than one in ten probably, tha
look like growing into really worthy stock birds—
are reserved for the cockerel rearing runs. Thes
"reserves" are gradually weeded out from tim
to time, and the "duds" appear in due cours
upon the table—so that at five months old I fin
myself left with only a few very choice picke
birds, for which I find a ready sale as stock birds
among those who don't want to pay the price tha
an individually pedigreed bird demands. At thre
months, therefore, I have usually cleared the las
of my cockerels from the middle compartment
and none too soon, for by this time the 150 pullet
or so at either end of the house are beginning
need a little more room, so that the centre com
partment, which has been kept re-littered on th
same lines, is in its turn topped up with a trus
or two of straw, the compartment wire doors a
unhinged and stored away until next season, ar
the two hatches of pullets (now much on a par,
I generally try and arrange that there shall
as little interval as possible between the tw
hatches) are finally mixed; trap-doors on sou
side of house are now closed for the season, a
from then on the mixed flock of pullets are on
let out into the north run, and both nursery ru
and secondary runs are rested until the followi
season.

So far I have hardly touched on the question
runs. This "All-Purpose" system, of cours
entails three runs, as will be most readily und
stood by referring to the accompanying grou
plan. Call your runs A., B. and C. A. is t
nursery run, 20 x 20, provided with what I call
storm entrance, a built-out exit with traps e
and west, so that one or other, or both, may
opened, according to the weather conditions.
mound of fresh clean earth is built up to this ex
so that the baby chicks may readily find their w
in and out—and incidentally little and often is
bye-word when it comes to this question of letti
chicks out, unless the weather happens to be p
ticularly balmy. My first experience is that
minutes or so in almost any weather won't h
them a ha'porth, where perhaps half an hour wo
mean death and disaster! Watch your old
with a brood of her own in uncertain weath
watch how she insists on their all coming
under" every ten minutes or so for a warm u
she'll tell you. And providing you don't le
them out for too long at a time, don't mind th
feet getting wet, it'll do them good—there's
more harm done by coddling in my opinion th
ever was done by letting them get out upon ev
available occasion.

At round about the month old, as and when
weather permits, they are let out into B. r
which has been scythed over, so that they may
lose themselves in a forest of long stuff, and

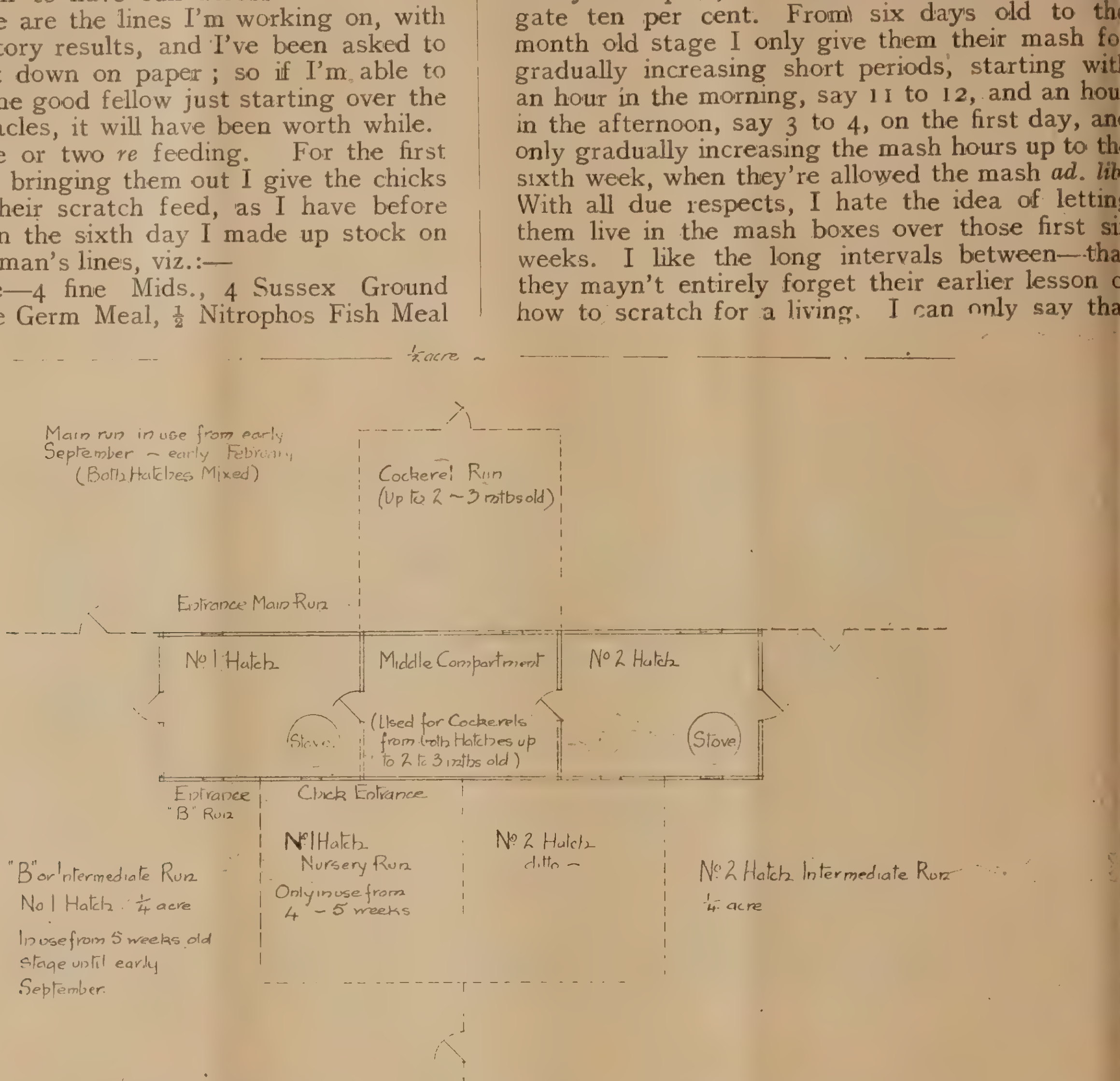
nursery run is thoroughly swept with a besom and allowed to rest, kept mown from time to time, until next season. The two hatches, therefore, are now confined to their separate B. runs, at either end of the house, until round about the end of June, by which time a cut of hay has been taken from C. run—and we arrive at the mixing stage.

During August both A. and B. runs are given a dressing with basic slag at the rate of a pound to four square yards, and early in September any bare patches are lightly "forked" over and sown thickly with a good No. 4 lawn seed mixture, so that they turn out fresh and sweet the following spring. Both A. and B. runs are mown now and again in the course of the season in order to encourage the young stuff. In alternate years the runs are given a liming, instead, at the rate of a pound to two square yards. The same treatment holds good as regards the main C. runs, when the pullets are removed to the adult laying houses in February; the run is at once given a slagging or liming, as the case may be, and all bare patches are broken up and seeded as soon as the state of the ground permits, so that by the end of June these main runs have had the four best growing months of the year in which to ecover, and in a good season a heavy cut of hay has been taken.

Early in September, probably, you'll find your irst pullet egg, the signal that it's time to give hem their nest-boxes. Personally I use portable anges of six; and by this time I shall have already weeded out the early moulters among the two-year-olds; so that I'm able to transfer a range of nests rom the old birds to the pullets—taking care, of ourse, that the aforesaid nest block, which is an ntirely separate and portable affair standing on its own four legs, has been thoroughly scoured and subsequently Solignised. This nest block is placed against one of the centre partitions, and quite serves the pullets' needs over the first few weeks. As other ranges can be spared from the old birds' houses, across they come (after the same treatment) until you have four blocks of nests, viz., twenty-four nests to the 60 ft. house. No good giving them too many to start with—they'll only think they are put there to sleep in! So now we've got them started on the winter laying campaign—comfortably housed in the same house they've known from chickenhood upwards; and if, meantime, the house has been kept properly sweet and clean, why not? And if every pullet among them doesn't start pumping out her eggs at the rate of four a week from early November on, then there's something else wrong somewhere with either the birds or the management! And so we carry on until that quiet spell in February comes along, when they're shifted out to one of the adult laying houses, that meantime we've had plenty of time to spring clean most thoroughly at our leisure, instead of the usual scurry and flurry of trying to push pullets into the laying houses in the autumn, before you've had time to get rid of the last of the old birds.

60 ft. x 15 ft. Rearing House.

There are three things I claim for the system. Firstly, economy in initial outlay. No special (and usually stuffy!) brooding houses; no special (and usually draughty!) rearing houses. Easy routine. Plenty of time to "spring clean" properly the adult laying houses, instead of the usual lick and promise the while the pullets are pushed in nearly on top of the old birds. Don't for heaven's sake think that I am claiming it as *my* system! I dare say there are dozens of others that I've never heard of working on much the same lines, even though


½ acre
Main run in use from early September ~ early February (Both Hatches Mixed)
Cockerel Run (Up to 2 ~ 3 mths old)
Entrance Main Run
No 1 Hatch
Middle Compartment
No 2 Hatch
Stove
(Used for Cockerels from both Hatches up to 2 to 3 mths old)
Stove
Entrance "B" Run
Chick Entrance
No 1 Hatch Nursery Run
Only in use from 4 – 5 weeks
No 2 Hatch ditto –
"B" or Intermediate Run
No 1 Hatch ¼ acre
In use from 5 weeks old stage until early September.
No 2 Hatch Intermediate Run
¼ acre

Ground Plan "ALL PURPOSE SYSTEM" of Brooding and Rearing ~
60ft. "Extensible Unit All Purpose" House ~ Divided into 3 Compartments 20 x 15 ~
~ Situated in Centre of One Acre of Grass Land. –

I don't happen to have run across them. All I know is, those are the lines I'm working on, with quite satisfactory results, and I've been asked to try and put it down on paper; so if I'm able to help at all some good fellow just starting over the first few obstacles, it will have been worth while.

Another line or two *re* feeding. For the first six days after bringing them out I give the chicks nothing but their scratch feed, as I have before described. On the sixth day I made up stock on Mr. Tom Newman's lines, viz.:—

By measure—4 fine Mids., 4 Sussex Ground Oats, 1 Maize Germ Meal, ½ Nitrophos Fish Meal (impregnated with cod liver oil), ½ unextracted dried Yeast or "Yestos," 2 finest flaked Charcoal.

From the sixth to the fourteenth day I add four measures of the best broad bran procurable to one measure of the stock mash; from the fourteenth day to the end of the second month I add three measures of the bran to one of the stock mash; at the two months they go on to the rearing mash, again based on Mr. Newman's Formulæ, viz.:—

By weight—3 Bran, 4 fine Mids., 1½ Sussex Ground Oats, ½ Maize Germ, ¼ Meat and Marrow-bone Meal, ¼ Unextracted Dried Yeast or "Yestos," ½ fine flaked Charcoal.

I keep them on this mash until after the five months old stage, when, if they're not too forward, I start slightly reducing the bran down to finally probably only two parts, and increasing the meat and yeast up to, but never exceeding, an aggregate ten per cent. From six days old to th month old stage I only give them their mash fo gradually increasing short periods, starting witl an hour in the morning, say 11 to 12, and an hou in the afternoon, say 3 to 4, on the first day, and only gradually increasing the mash hours up to th sixth week, when they're allowed the mash *ad. lib* With all due respects, I hate the idea of lettin them live in the mash boxes over those first si weeks. I like the long intervals between—tha they mayn't entirely forget their earlier lesson o how to scratch for a living. I can only say tha it's my experience that if they're allowed to stu their little crops just whenever they like over tho first six weeks, they'll never thrive in the lor run as will the chick that has been kept on tl move from its earliest days.

I haven't yet rubbed in the need for the mo thorough disinfection the moment the pullets ha been shifted out in February. The whole house first of all swept and scraped down, and then mo carefully sprayed with a strong solution of Izal (a pint of veterinary Izal to a three-gallon buck of water)—every crack and crevice; the wh house is, in fact, soaked, and before it has h time to dry out thoroughly scrubbed down as r quired. I may say that while the dropping boar have been in use, they have been scraped eve second day and dusted with Izal powder. Perc brackets, etc., are dusted every few weeks, and with these precautions I am glad to be able to say I've never had to cope with anything in the vermin line yet, barring a plague of rat fleas in one of my houses before I had made it rat-proof—and even *they* seem to leave the boards and perches, and even the birds themselves severely alone; but it meant shifting out all the litter, nest boxes, etc., and disinfecting most drastically before I finally got rid of them.

Just a word or two *re* the "balance sheet"—for I'm constantly asked whether the game pays! Follow two items from my last year's balance sheet—Foodstuffs, £600; Sales of Eggs, £1,300. The gap you'll fill in for yourselves. It largely boils down to the question of whether you're going to do most of the work for yourself, or whether you're going to pay somebody else to do it for you! If you are going to employ an experienced poultry manager, and so avoid most of the worry and responsibility, then it seems to me one should look upon the capital outlay as a pleasant form of investment, and one should be content with a reasonable rate of interest, instead of expecting the poor poultry manager to somehow pay his own salary, plus anything up to 50 per cent. on capital outlay at one and the same time. And while I'm on this subject, may I add a few words in support of the stand I am delighted to see our Editor taking against what might almost be dubbed this libellous campaign in favour of the cross-bred. We are all quite aware that there are certain strains of the lighter breeds that have been let down in the sometimes over-rapid race for egg production, but to damn us all for the sake of the few is neither just nor decent. At any rate, it is the White Leghorn that has taught me that this business of egg production *can* be made worth while!

NORTHERN UTILITY POULTRY SOCIETY LAYING COMPETITION, 1924-25.

FINAL REPORT.

Winners of Prizes and Certificates.

Section No. 1. Championship.—Pen No. 7, Mrs. Crookes, Upper eal Kent. 1.812 eggs, score 1,812. Wins Gold Medal, Silver Cup or leading pen in section; Second Class Certificate. Pen No. 6: r. G B Metcalfe, Lechlade, 1,746 eggs, score 1,741. Wins Silver edal. Pen No. 2: Messrs. Longworth Bros., Rawtenstall, 1,687 ggs, score 1,687. Wins Bronze Medal.

Section No. 2. White Leghorns.—Pen No. 60: Mr. Norman F. Kimberley, Blagdon, Bristol, 959 eggs, score 944. Wins Gold edal. Silver Cup for leading pen in section, and Second Class ertificate. Pen No. 30: Mr. Wm. McMahon, Newton Mearns. lasgow, 918 eggs, score 910 Wins Silver Medal and Second Class ertificate Pen No. 15: Mr. Richard Beesley, Ballam, near ytham, 646 eggs, score 846. Wins Bronze Medal.

Section No. 3. White Wyandottes.—Pen No. 57: Mr. Robert P. irtue, Gordon, Berwickshire, 1,023 eggs, score 1,012. Wins Gold edal, Silver Cup for leading pen in section, Silver Cup for pen aying largest number of first-grade eggs, and First Class Certifiate Pen No. 38: Mr. Moorhouse Beaumont, Golcar, Huddersfield, 15 eggs, score 915 Wins Silver Medal. Pen No. 59: Mrs. Alec ilson, Garth, Breconshire, 827 eggs, score 807. Wins Bronze Medal.

Section No. 4. Any Other Variety (Non-Sitting).—Pen No. 65 Black Leghorns): Mrs. J H. Hill, Poulton-le-Fylde, 879 eggs, core 879. Wins Gold Medal and Silver Cup for leading pen in ection. Pen No. 66 (Black Leghorns): Mr. E. Jackson, Burnley, 38 eggs, score 632. Wins Silver Medal. Pen No. 61 (Black Leghorns): Mr. Philip K. Berry, Market Harborough, 608 eggs, score 08 Wins Bronze Medal.

Section No. 5. Any Other Variety (Sitting).—Pen No. 89 (Rhode Island Reds): Mr. Tom Gardner, Garstang, 996 eggs, score 917. Wins Gold Medal, Silver Cup for leading pen in section, and Second Class Certificate. Pen No. 83 (Rhode Island Reds): Mr J. M Thomas, Hebden Bridge, 852 eggs, score 852. Wins Silver Medal. Pen No. 75 (Rhode Island Reds): Mr. R. Duckworth, Burnley, 812 eggs, score 812. Wins Bronze Medal.

Section No. 6 (Two Birds).—Pen No. 97 (White Wyandottes): Messrs. Bolton and Gardner. Manchester, 438 eggs, score 415. Wins Gold Medal, Silver Cup for leading pen in section, and First Class Certificate Pen No. 95 (White Leghorns): Mrs. A. Stow, Barrowford, 400 eggs, score 400. Wins Silver Medal and First Class Certificate. Pen No 93 (White Leghorns): Mr. Henry Purves, Manchester, 399 eggs, score 381. Wins Bronze Medal and Second Class Certificate.

Section No. 7 (Single Birds).—Pen No. 111 (White Leghorns): Mr. E. J. Stone, Bristol, 227 eggs, score 227. Wins Gold Medal. Silver Cup for leading pen in section. and First Class Certificate. Pen No. 110 (White Leghorns). Mr E. M. Saul. Ross, Herefordshire, 222 eggs, score 216. Wins Silver Medal and First Class Certificate. Pen No. 116 (White Wyandottes): Miss R. K. Tallis. Pentnewydd, 215 eggs, score 215. Wins Bronze Medal and First Class Certificate. Pen No. 113 (White Wyandottes): Mr. F. Heyworth Burnley, 212 eggs, score 212. Wins First Class Certificate. Pen No. 118 (Rhode Island Reds): Mr. Wm Edmondson, Burnley, 195 eggs, score 195. Second Class Certificate.

Section No. 8 (Small Breeders).—Pen No. 30 (White Leghorns): Mr Wm. Machin, Chester, 1,040 eggs, score 911. Wins Gold Medal, Silver Cup for leading pen in section, also "Pedley" Challenge Cup and Second Class Certificate. Pen No. 129 (White Leghorns): Mr. T. Lindley, Leeds, 878 eggs, score 784. Wins Silver Medal Pen No. 131 (White Leghorns): Mr. E. M. Saul, Ross, Herefordshire 724 eggs, score 724. Wins Bronze Medal

Section No. 9 (Cross-Breds).—Pen No. 132 (B.L. x R.I.R.): Mr. Wilson Beattie, Rothersthorpe, 1,042 eggs, score 864. Wins Gold Medal and Silver Cup for leading pen in section. Pen No. 133 (B.L. x R.I.R.).—Mr G B. Metcalfe, Lechlade, 1,171 eggs, score 865. Wins Silver Medal. Pen No. 134 (B.M. x W.W.); Mrs. Clara Egar, Burnley, 860 eggs score 856. Wins Bronze Medal. Silver Cup for pen making highest score during first 16 weeks. Silver Cup for pullet laying largest number of first grade eggs.

Section No. 10. Ducks.—Pen No. 135 (Khaki-Campbells). — Mr. Wilson Beattie, Rothersthorpe, 872 eggs, score 872. Wins Gold Medal and Silver Cup for leading pen in section Pen No. 140 (Khaki-Campbells): Messrs. Maunder and Colson, Yeovil, 693 eggs, score 693. Wins Silver Medal. Pen. No 137 (Khaki-Campbells): Messrs. Chivers and Sons, Cambridge, 668 eggs, score 668. Wins Bronze Medal.

Section No. 11. Single Ducks.—Pen No. 146 (Khaki-Campbells), Mr C. A. Marston, Burton-on-Trent, 174 eggs, score 174. Wins Gold Medal and Silver Cup for leading pen in section. Pen No. 144 (Khaki-Campbells): Mr. O C. Brown, Scunthorpe, Lincs., 195 eggs, score 165. Wins Silver Medal. Pen No. 147 (Khaki-Campbells): Capt. P. C. Thompson, M.C., Howden, 138 eggs. score 138. Wins Bronze Medal.

WYE COLLEGE DUCK LAYING TRIALS, 1925-26.

Held at South-Eastern Agricultural College, Wye, Kent.

These trials, which commenced on November 1st, 1925, extend over a period of 48 weeks. Each entry consists of five ducks, of which there are 145 in all. All the ducks are trap-nested, and are run as one large flock, on free range over grass land.

For the purpose of awards, the birds are divided into two sections, viz:—(a) Khaki-Campbells. (b) Indian Runners.

The eggs are graded according to weight. viz.:—A first-grade egg is one which weighs 2ozs. or over. Second-grade egg are those which weigh under 2ozs. The latter do not score.

Report for First Period—November 1st to November 28th, 1925.

The ducks arrived on October 14th and 15th and were given a settling down period until November 1st, on which date recording commenced. The birds arrived in good condition, and have settled down satisfactorily.

The total number of eggs laid during the months (28 days) has been 1,060, which gives an average per bird of 7.31 eggs Of these eggs 964 have been first-grade and 96 second-grade Sixty-two ducks have been in lay during the month, and 83 have not yet commenced. Three eggs have been laid outside the traps, and are, therefore, unrecorded.

The leading position in the whole of the trials is held by Mr. G. Powell's Pen No. 25 (Fawn and White Runners), which have made a score of 90 first-grade eggs.

The leading pens in the Breed Sections are:—

Khaki Campbells.—Mr. G. H. H. Simmon's Pen No. 6, 88 pts.: Mr. F. W. Putnam's Pen No. 5, 86; Mr. A. N. Dickson's Pen No. 17, 63

Indian Runners.—Mr. C Powell's Pen No. 25, 90; Miss Harrison Bell's Pen No. 26, 81; The Misses Davidson and Chisholm's Pen No. 20, 52.

Competitors and others may visit the trials on Wednesdays by appointment only.

F. W. RHODES, Poultry Department.

December 2nd, 1925.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answers all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

E. S. T. (Carnarvon) complains that many of his hens have not recovered from the moult, and are laying badly, and that he experiences this difficulty every year. He is feeding at present on two measures of clover, three of bran, four sharps, one ground oats, one maize meal, and one fish meal, and one biscuit meal, as a wet mash. The samples which he encloses are unsatisfactory. The clover meal is little better than clover "chop," and the sharps are only fine bran. If he experiences this difficulty every year the probability is that his birds are not in good bodily condition when they do moult, and this must be due to the feeding. His present mash is wrong. The bulk is excessive. The quality of the ground oats leaves much to be desired. I would suggest he tries the following:—1lb. good alfalfa meal, 4lbs. good middlings (these must be considerably better than what he is using), 1lb. maize meal, 1lb. biscuit dust, ¾lb. fish meal, and add to this half pound of linseed meal. He will be much wiser to see to the better feeding of his birds, as I am convinced that his experience with the moulting every year is due to his methods of feeding.

L. E. (Stafford) wishes to know whether he should give the birds something "hot" during this cold weather. I think I know what he means—either cayenne pepper, ginger, mustard, etc., and I would not advise this. Far better keep them hot by stimulating exercise. A little grain in the litter when they come off the perch, a little during the day to amuse them, and a scratch for their grain at night will be far better, and a great deal healthier than anything else. He also states that the hen **imparts** vitality to the growing embryo, and this is where the "biddy" scores over the incubator. I do not think that we have any definite evidence on this point. It would, perhaps, be more correct to say that the hen **prevents** loss of vitality.

T. B. (Long Eaton) asks for a good wet mash for birds kept on the semi-intensive system. He has about 50 on a quarter of an acre of land. Plenty of green food is available at all seasons of the year. Neither does he require a formula with meat or fish meal in it, as he usually buys fresh meat, such as lights, etc., once or twice a week. At present he is giving a mash composed of: One stone middlings, ½ bran, ½ Sussex ground oats, ¼ maize germ meal, and his birds seem rather over fat, and do not lay quite as well as he would like. In fact, thi year he has had the poorest results that he has ever had. Th birds that were hatched in April have not commenced to lay with the exception of two or three, and these have now. Th grain ration consists of two parts wheat, one oats, and on kibbled maize. The following would be a good wet mash:— 1lb. bran, 4lbs. middlings, 1lb. biscuit meal or maize meal 1lb. ground oats, and to this should be added ten per cent. animal food. He mentions that the droppings are mustar colour. There is the possibility that he is overdoing the anima food. He asks for any advice I can give him. The best advic I can give is to ascertain the bodily condition of the birds, an see whether they are in a condition to lay. He says the "seem" in an overfat condition. I am rather surprised to hea this with young birds. At any rate, it is not a question "seeming"; it is for him to know. There are other question than feeding when eggs are scarce, such as crowding at nigh exposure, uncleanliness, etc., etc., and all these should be con sidered.

W. S. (Jersey) writes: "From my flock I have noticed a pull of outstanding type. The bird is ten months old. I have bee feeding wheat, oats, maize, and buckwheat. Soft mash, viz.:— Biscuit meal maize meal, Sussex ground oats, dried off wit bran. This she will not look at. The grain she seems to pic up and then drop it again. She will not look at cooked fres meat. Yet she is quite lively and not moped up at all, and i consequence of above is much on the light side, and has no been off her food for three weeks," and he wishes to know wh he can do.—I think she should be examined carefully to s there are no signs of diphtheric roup, while at present I wou give her sulphate of iron in the drinking water at the followi rate:—Dissolve two ounces of powdered sulphate of iron in quart of water and add one teaspoonful of the solution to eve pint of drinking water. Also try feeding her on bread and mi and a little boiled rice dried off with ground oats. I am afra I cannot offer any further advice than this. As the bird is n eating it would be inadvisable to give Cod Liver Oil. Th would be disastrous.

J. H. sends me a sample of mash which consists of two par ground oats, two barley meal, one alfalfa meal, one pea me 1½ meat meal, dried off with fine thirds. This mash has giv good results, and he asks if it would be better if he boug through the S.P.B.A. Yes, I think he could do rather bett We could put such a mash on rail, without the pea meal, f 12s. 6d f.o.r. LONDON, in not less than five cwt. lots. would suggest he tries using soya bean meal instead of p meal. It would be cheaper, and as the barley meal does n appear of very good quality, it would be better to use mai meal. He encloses sample of a poultry powder to put in t mash, guaranteed to make fowls healthy, and supply plenty eggs, to prevent roup. He calculates that it works out at per cwt., sold in 6d. packets. I have sifted it, and find contains about 50 per cent. cereal dust, a little carbonate iron, and some fenugreek. It is coloured with venetian red. I not think it would have any good effect.

G. S. (Newcastle) writes that he was greatly startled to re my answer to a query in last week's "Eggs," in which I st that the only time it is unwise to feed maize and barley when the birds are out of production, and to growing stock. has been feeding maize meal, etc., to his growing stock, and n wishes to know whether he has done much harm. I do think he quite understands, or perhaps I was very inexplic I did not wish to imply that maize or maize meal was injuri to growing stock; only that it lacks bone-forming material, is apt to bring pullets rather early into production, and for t reason great care should be taken not to feed it in exce With regard to giving it to hens which are through the mo who have not started to lay. It is always a little dangerous do this, as at that period there is a tendency to put on inter fat. It is all right when they have once started laying aga "G. S." unfortunately is not doing well, and his system feeding is not producing eggs. He must not suggest that has necessarily ruined his flock. I am inclined to think feeding is not the cause of his trouble, but it may be bet if he gave the wet mash at mid-day, and a good two ounces

Bilbrook, Codsall,
Near Wolverhampton,
December 5th, 1925.

o Mr. Albert H. Brain,
Principal, VISOL Laboratories,
West Bromwich.

ear Mr. Brain,

In adding my testimony to the numerous ones u have already received, it is with great pleasure d satisfaction that I do so.

Visol has done wonders for the birds on my m, which some months ago were in the throes an attack of Roupy colds, and many sickening the acute stage of Diphtheritis, looking a st dejected crew. I lost no time after hearing Visol in getting some, and following your most tructive methods, and sure enough, though I difficulty in getting them to drink the solution, you said they drank enough to bring about a ady cure, which to-day I am most grateful to is complete.

hank goodness for Visol, I say—and the ustry well need thank you, too, for your great vices.

is, indeed, very funny that following the licity given to Visol, there are many people write and say what they have done, can do, how to do it, but if it had not been for you el we should never have heard about the others, ch may be rightly termed "also rans." You come into the open field, told the people what could do with Visol, and left it for the istry's noble friend, Mr. Toovey, to prove, h he has done so handsomely.

Fie upon those who to-day would detract one iota from your brilliant achievements and endeavour by subtle subterfuge, which ill becomes them, to rob you of the fruits of your long and earnest labours.

Whatever may come, Visol is here, and I am one of those who are only too glad to say that never will my farm be without a supply of Visol, handy for treatment on the slightest provocation, and so prevent any further trouble.

There is another great thing about Visol—its health giving properties, there being no trace of liver and digestive trouble with the use of Visol, which some writers exclaim about some preparations they offer freely enough to unwary readers. Since Visol began its work of curing my flock egg production has increased very much, and birds that a few weeks ago looked sick and weakly almost unto death are to-day eating vigorously, looking fresh and on the point of lay—another tribute to your knowledge and skill in handling flocks for winter egg production.

You have my permission to use this letter of appreciation in any way you desire.

Yours very truly,

(Signed) HAROLD E. SHAW (Capt.).

It would be almost a sacrilege to add anything savouring of a "boost" to the foregoing, especially following, as it does, similar tributes from such world-known authorities as T. W. Toovey, Tom Barron, John Meekings, F. R. Welch, W. H. Brady, John H. Dowden, Col. Napier and a host of others. The Bishops and the Prelates have spoken the word; the truth has been proclaimed from the house-tops; there's a wave of revival sweeping through the land—a revival of hope against the depredations of disease amongst poultry; the prophets and sages have spoken, and only the "doubting Thomas's" remain to be converted . . . . . but **you** are not a "doubting Thomas," are you? The address is West Bromwich.

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During the controversy that is taking place through the columns of "Eggs" with regard to ventilation, we keep steadily building houses that do self-ventilate. We believe more in practice than theory. Our customers' letters prove that our system is right. Can be used in any type of house. Our Apex Houses will get you winter eggs, and for brooding nothing better is made. The unbeatable Sondix Blue-Flame Lamp is now on the market. Ventilated floors, that do ventilate, not dirty wood slatted ones, but those you can wash. Will last years. The Sondix Hover with V floor and blue-flame lamp cannot be matched, let alone beaten.

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MILLS AT LONDON — IPSWICH — KING'S LYNN — HULL.

rain as the last feed at night. Possibly his birds are a little nderfed, as I notice the grain is limited to 1½ozs. per bird. The imple of toppings he sends contains rather a lot of bran, but herwise is good. I think he should try and ascertain the con-ition of his birds. When the feeding is not at fault (which far as I can discover from my correspondent's description is t the case, I always suspect that the birds may be in under ndition, and that is why they do not lay.

L. F. (Stonekirk) has had a bad failure with his incubator. he hatch was less than 30 per cent., and a number of chicks tched failed to absorb the yolk. These are all the details e gives. I can only surmise that he has been working at too igh a temperature, and he would be wise to have his thermo-eter tested. (2) His second question relates to the value of ried milk, and he asks whether the statement is correct that is not beneficial to chicks over twelve weeks old. I think I as responsible for the statement that its value to a chick of is age was very small in comparison to that during the first x weeks of a chick's life, but I would not go so far as to say was not beneficial at all after twelve weeks. I have not space ere to explain why this is, but will do so in another column.

A. B. (Lichfield) writes:—"I understand from reading various ticles in 'Eggs,' that when poultry are in full lay, they can-t be overfed, **especially with maize,** but when they are not ying they are apt to get overfat on the same food, and over-tness may lead to future trouble. What is the best thing to , if you have in the same pen some completely off laying, and hers going hard at it? In one lot I have 20 R.I. Red pullets— x of them started laying early, and have now stopped, and 14 them are laying regularly. In another lot I have 17 R.I. eds, various ages, in which five only are laying. Should we ed for the majority, and let the minority take their chance? have not house accommodation to separate them."—"A. B." as made a small mistake. The words "especially with maize" e not a correct interpretation of what has been written. If ere is one food you could overfeed with more than another is maize, but there is little danger of doing this with a hen full production. Now, in answer to his question. The pullets Lot 1 which started laying early are probably in a neck oult. There is no need to feed them differently than the hers, as the diet is rich enough to bring them through and art them laying again. We are not dealing with hens, which ould have a great tendency to put on fat between the finish the moult and the time they come into production again. It ould be unwise to change the food for the minority, as the ajority which are in full lay would be checked. In answer the second question, at this season of the year, "A. B.," ould feed a full ration for egg production to these pullets of rious ages. Those which do not respond should be sold for e table.

N. C. (Co. Down) has amongst her pullets of this year 60 hich have so far not begun to lay yet. They were hatched st April, and come of a very good laying strain, so that she es not know if it would be better to sell them now for eating, if they would still make good, and be worth keeping.—My rrespondent does not mention the breed. The fact that they me of "good laying strain" makes no difference. We have to al with these birds, and not the strain from which they me. There are good and bad even in good strains. Assuming ese to be Leghorns, they are not likely to prove profitable. moderate layers, if properly reared, would have laid ere is. It would be wise to get rid of them. If they are Wyan-ttes hatched early in April, the same remark would apply, d they should be fattened at once and marketed, but if sent the London Markets, the salesman should be advised that ese are fattened pullets which have never laid. If they are e-hatched April pullets I would give them a little longer, as e later hatched birds take longer to develop, and if they start ying in a week or two, and are good layers, may lay well o the autumn of next year. My correspondent must, how-er, trust to some extent to her own observation. Reliance may placed on the salesman advertising in "Eggs."

A. J. (Dinton) has had an outbreak of diphtheric roup and icken pox, and wishes to know if her birds will be fit to breed m next season.—If a bird had a mild attack of the disease ere would be no great objection to using him as a breeder, but if a bad case, which has required a lot of nursing to pull round, his constitution is likely to be weakened, and I would strongly advise my correspondent not to breed from him, even although he may appear in perfect health.

B. S. (Ayr) sends a sample of meat meal which he is able to procure locally at a very moderate price. He has been using this in his wet mash up to 15 per cent.; results are not satisfactory. He admits he has only been able to give a very small quantity of green food, but to compensate for the lack of this has given a weekly dose of Epsom salts. The mash is:—Thirds, three parts; biscuit meal, one; oatmeal, one; and the meat meal three quarters part. He wishes to know if he should increase the meat meal.—The failure here is due to the lack of calcium salts. If "B. S." were to add one part Alfalfa meal to the mash, and 5ozs. of the following mixture to every 10lbs. of mash, he would see an improvement. The mixture is:—Steamed bone flour, 60 parts; common salt, 20; powdered oyster shell or lime stone dust, 20 parts, by weight. The Epsom salts will not replace green food, and should be discontinued.

X. X. X. (Somerset). Please see latter part of reply to "B. S." (Ayr). If this has been your system, then I think we can attribute your hatching failures to this constant dosing with Epsom salts, and not to the incubator. You would, however, be wiser, especially in view of the fact that your incubator room frequently falls below 40 degrees, if you did not remove either felt until the 19th day of incubation, and then only remove one. The sample of thirds sent is of good average quality.

K. L. (Northampton). Yes, I advise that the glass front of the hot-air incubators should be covered during the time of hatching, as the newly-hatched chick is naturally very much exhausted by its struggles to get out of the shell. If the incubator is darkened it will be quiet and rested, and there is less likely to be digestive trouble, consequently your chicks will be more healthy and vigorous. (2) Your second question is too big a one to be dealt here. It is probable that the wonderful results obtained by the use of the ultra-violet rays are due to the fact that they assist in the more complete assimilation of the lime salts, and it is quite possible that we may some day discover that this may be the solution of the vitamin problem. I mean that some foods, cod liver oil, for example, may tend to the more complete assimilation of the minerals, and that is why it has been found of value as a preventive of leg-weakness.

GLOUCESTERSHIRE LAYING TEST SOCIETY, 1924-1925.

The climatic conditions during the period under review were on the whole better than in 1923-24, as the summer was much finer. It should be recorded that a large number of birds were sent to the test in lay, and in consequence a number went into a slight moult. The somewhat exposed and high altitude of the test ground cannot be emphasised too much, as it serves as a test of stamina, in addition to egg production. The low mortality and satisfactory average per bird indicates the amount of care taken by the competitors in the selection of their birds and also of the excellent management during the test period.

The number of pullet eggs laid throughout the year was:—Grade "A," 56,499; Grade "B," 1,401; Grade "C," 46. Grand total 57,946, equals average of 181.6 per bird. Further, the averages of Grades "A" and "B" are 177.1, and 43 per bird respectively.

The test has continued to attract many interested persons, including organised parties, and the keen interest taken by the general public is marked by the numerous inquiries that have been made by letter.

Gold, silver and bronze medals have been awarded to the competitors holding 1st, 2nd and 3rd positions in each section respectively.

The Duck Sections have been more satisfactory this year, and record should be made of a K. C. duck in the Single Pen Section which laid a total of 305 1st grade eggs, of which 217 were laid on consecutive days. The total number of eggs laid was 3,549, giving an average of 152.5 per duck.

For 1925-26 the pen and single sections have been made open to the five counties of Gloucestershire, Hereford, Somerset, Wilts and Worcester.

SINGLE PULLET SECTION

(Open to all Poultry-Keepers who are occupiers of land in the Counties of Gloucester, Hereford, Somerset, Wilts and Worcester). Figures are Eggs and Points respectively.

Section 1. White Leghorn.—L. Crist (13), 255, 1150; G. H. H. Simmons, 246, 1103, J. L. Brown, 245, 1090; H. W. Stephens, 244, 1078; Miss K. Feaviour, 246, 1062; Miss N. Townsend (19), 230, 1027.

Section 2. White Wyandotte.—H. W. Fowles, 261, 1171; Lord

(Continued at Foot of Column Next Page).

THE SCOTTISH NATIONAL POULTRY COUNCIL.

A SUCCESSFUL CONFERENCE.

A very successful conference was held in the University Agricultural Lecture Hall, Edinburgh, on Saturday, December 5th, Mr. J. Purdie presiding. There was a large attendance.

The speakers were: Professor Willard Thompson, Dr. Crew, Mr. Dalling, M.R.C.V.S., and Mr. Tom Newman.

Mr. J. G. Woods presented the prizes and certificates to the successful competitors in the Scottish National Laying Test. In congratulating them he remarked that the Test was second to none in Great Britain, and he thought the average production of 187 eggs per bird was highly satisfactory, especially as the Test ground was situated in a very bleak position.

Professor Thompson's interesting paper appears in another column of this issue.

Mr. Dalling's paper was interesting and important. His subject was "B.W.D. and Roup." Speaking of the former, he said it has been repeatedly urged that all chicks are carriers of the Bacillus Pullorum, the organism which causes the disease, and that unfavourable environmental conditions will cause it to develop. This was wrong: they had never, by bacteriological examination, been able to trace the bacillus in a healthy chick. We were glad to hear such a definite statement from Mr. Dalling, as the idea has been widely held, and we have never known it to be so definitely contradicted before. The lecturer indicated the methods of infection as follows:—

(1) Through the eggs (chicks hatched from infected eggs).

(2) From chick to chick (through the excreta).

(3) Carrier hens infecting normally healthy hens.

(4) By the male.

(5) Feeding infected eggs.

The carrier hen was difficult to detect, as to all appearances she was as healthy as any other. The lecturer emphasised the fact that wherever there was crowding, the percentage of chicks infected would be considerably higher. He stated very definitely that chicks were not susceptible to infection after the sixth day. Infected chicks may survive, and become the "carrier" hen.

The lecturer then referred to the Agglutination Test, and the Intradermic Test. Both, he said, were to a degree unreliable. A hen may react to-day and may not react in a month, but a hen which has reacted once will react again.

Speaking of the Intradermic Test, the lecturer said no blood was required, and this might be carried out by the poultry farmer himself. If a bird reacted there was a swelling on the wattl He was convinced that a serum could be produce which would check the disease; they already mad a test on a Norfolk farm, and the report had bee very satisfactory. He could not say definitel whether a cockerel could be infected. Speakin of Roup, the lecturer stated that it was all du to the same cause. Serum treatment would b successful as a preventive. They had obtaine some from America which had proved satisfactory but that from Holland was not so.

Dr. Crew gave a short address on "In-she Mortality." In brief, we may say his view is tha certain hens lay eggs carrying lethal factor which prevent their hatching. He demonstrate this by Mendelian ratios, mating yellow mice which behave like the Andalusian, which, mate to a bird of the same colour as itself, never breed true. The Hetazygous mice were born alive, bu the yellow (homozygous) died before birth. Hi theory was that this mouse inherited, with a doubl dose of yellow, some lethal factors which killed it

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Sherborne (37), 222, 992; W. R. Partridge (38), 218, 976; W. R Partridge (34), 220, 974; Philip Clapham (40), 215, 971; G H. F Simmons (31), 202, 908.

Section 3. Rhode Island Red.—Miss M. Lawrence (39), 244, 1089 G. B Metcalfe, 196, 876; Miss M. Lawrence (42), 174, 774; W. R Partridge, 169, 740; S. Barnes, junr. (43), 152, 661; S. Barnes, jun (45), 131, 597.

Section 4. A.O.V. Light Breed.—Churchdown Pedigree Farm (An.), 231, 1033. H. W. Stephens (B.L.), 207, 912: Churchdown Pedigree Farm (B.L.), 184, 807; Major J. C. Dugdale (B.L.), 182, 792 Miss K. Feaviour (B.L.), 177, 782; Miss M Johnson (W. la B.) 177, 766.

Section 5. A.O.V. Heavy Breed.—Miss M. Lawrence (Bf.R.) 212, 938; W. R. Partridge (B.Veld), 210, 916; Mrs E. Weinhol (Aus. Orp.), 202, 913; G. H. H Simmons (Bf. R.), 201, 896; Lad Bledisloe (Aus. Orp.), 198, 851; R. T. Miles (B.Veld), 175, 779

SINGLE DUCK SECTION.

Section 6. Any Breed.—Mrs. H L. Hanks (K.-C.), 305, 305; H W. Fowles (K.-C.), 232, 232; Mrs. W. Pearce Ellis (K.-C.), 194, 193 W. R. Partridge (15) (W.R.), 191, 191; W. R. Partridge (14) (W.R.) 185, 185; G H H. Simmons (K.-C.), 179, 179: Miss N. Townsen (12) (K.-C.), 179, 179.

WORCESTERSHIRE LAYING TEST.

First Monthly Report.

Section 1. White Leghorns.—Worcs. Poultry Farm, 79 eggs W. Pound. 64; F R. Welch, 59: W. Perks, 40.

Section 2. White Wyandottes.—Mrs. Edmondson, 86; W. F Morris, 78. G. E. Hanley, 75; A. A. Paull, 47.

Section 3. A.O.V. Light Breed.—R. M. Voce, 57; Capt. S Churchill, 50; B. Lloyd, 39; W. H. Hawkes, 18

Section 4. A.O.V. Heavy Breed—E. Owen, 60; F. H. Collins 54: W. F. Drew, 47: F. R. Welch, 32.

Section 5 A.O.V. Heavy (Single Bird).—W. R. Mitchell, 21 W. R Mitchell, 20, J Nortledge, 20; J. Nortledge, 20.

Section 6. A.O.V. Light (Single Bird).—F. Heydon, 16; J Rutter, 14; J E. Loxley, 7; Capt. Boyle, 3.

Section 7. A.V. Pure-Bred Duck (Single Bird).—Worcs. Poultry, 14; Miss M. Johnson, 5; R. J. Ewins, 4.

MIRFIELD AND DISTRICT LAYING TEST, 1925-26.

The 22nd September closed the first monthly period of the test The following are Eggs and Points to date respectively:—

Light Breed Pen, Section 1. Three Birds.—Mr. H. Buckley, 21 172; Messrs. Davey and Son, 18, 140; Mr H. Cowgill, 16, 127.

Heavy Breed Pen. Section 2. Three Birds.—Mr. A. G. V Erment, 44, 282; Mr Rasstrick, 38, 272; Mr. A G. V. Ermen, 31, 233

Single Bird, Light. Section 3.—Mr G. Shenton, 7, 50; Mr. H Armitage, 6, 43: Mr. A. Blackburn, 4, 27.

Single Bird, Heavy. Section 4.—Mr. W. Saxton, 19, 157; Mr. N Firth 21, 150: Mr. W. Saxton, 16, 125.

For scoring purposes six points will be the minimum numbe allowed, representing 1½ozs. in weight. One point will be adde for each ⅛oz or above this weight. Eggs less than 1½ozs. do no count.

The Annual General Meeting will be held on Wednesday, 6th January, 1926.

The Modern Laying House.

Now that the winter months are almost upon us we look, quite rightly, for some hopeful return on our outlay of expense and energy in an effort to rear our pullets to a creditable maturity. Each weekly issue of "Eggs" has, or should have been, thoroughly digested, and all the concentrated information which lies between those familiar green covers, should have considerably helped one to arrive at the stage above referred to.

It is an acknowledged fact that two of the most mportant factors which govern the life and usefulness of any mortal are:—

(1) HEREDITY.
(2) ENVIRONMENT.

The enormous scope for discussion, which is offered by either of the twin-subjects needs no enlargement of the writer's, inasmuch that he does not consider himself competent to give any *useful data* which might be unknown to most. The advancement of Science is not based on flippant "airings," but upon *constructive criticisms calculated to improve present standards of accepted truths.*

To anyone who is fortunate enough to possess a flock of healthy and productive birds, and, as far as possible, *consistently* so, it is common knowledge that o maintain such standard necessitates hard work, discriminate feeding, efficient housing, and selective breeding. To keep our finger upon the keynote of uccess *means* that we must observe all these points, nd seek to remedy any fault which proves a deterrent o our ultimate gain.

Under the first heading above come all those laws of eproduction established by our noted Scientists, ancient and Modern. Those I am going to leave alone. Under the second heading we have primarily the main three subjects:—*Feeding, Housing,* and *Management.* The first of these, I am sure, has been adequately nd ably treated by our Secretary's pen on numerous occasions; so many times, in fact, that one sometimes wonders that so many queries on the subject should ppear so frequently in the correspondence columns of "Eggs." The last item is really one of commonsense, and contributes greatly to the *personal factor* f the individual.

Now what about *Housing?* Are we quite sure that ll the most valuable facts appertaining to this paramount question are embodied in the construction of ur Poultry Houses? Or is it that they contain *too much?* Do we pay too much attention to the interior dornments of our larger Intensive Houses, and too ttle to the method and materials in the Main Construction?

In the issue of "Eggs," dated the 18th November, chanced to see a letter from Mr. R. A. Dixon, touching upon the Conservatism of Appliance Makers who e afraid to introduce anything new into their models" for fear of reducing their sales. This is a mentable fact. Some of the specimens of laying houses and intensive houses which find room in some of our poultry-yards, are purely *atrocities.*

Furthermore, we hear the victimised owner saying: "And it was built by So-and-So, too." *Look at those door frames—the miserable sills—the badly-fitting glass-beads,* where rain continually beats through into the house down on the floor, and saturates the litter. Then, again, look at the roofing felt(?)! Little better than tarred brown paper. Stuff like this is dear at a gift, but, unfortunately, the public are gulled by the price which happens to be less than that for a really genuine article, and there are some genuine goods to be had we know.

Let us run briefly through the main features of a really good laying house. In the first place, it is most important that the floor be perfectly level, thus ensuring that the litter is, normally, evenly distributed upon the floor. The outer boarding I prefer to be planed, rebated weatherboard, so that at the end of say, two, three or four years, any signs of bottom-rot can be easily put right by simply removing the bottom board right round the building, and replacing it by another. Where the boarding is done with vertical tongued and grooved boards, the bottom four inches or so of *every* board has to be moved, and this is a laborious job, and necessarily more expensive. With regard to type of roof; this is a matter of personal opinion. Some prefer span, others semi-span, or even lean-to.

I find the semi-span more desirable from the standpoint of ventilation, *i.e.*, with the perches running along the back of the house.

Now about the glass windows. There's no *best* side for the windows, provided they are *properly* put in. On the two sides and bottom of the *rebated* frame it is advisable to put a coat of Bitumen first. Don't put in on like war-time butter; spread it liberally. Over the same edges before the glass is fixed, put a strip of thickish Bituminous felt, about an inch of which is loose, and hangs over the outside of frame when the glass is in. This loose flap turns the driving rain, and the writer has found this method as "foolproof" as the glazier's putty, besides it isn't everyone who can use a putty-knife.

See that the doors are on properly made, rebated casings, not merely a piece of wood slid into a hole. Fix a good threshold to each door, and, above all, keep the *whole* of the exterior woodwork well treated with preservative.

On new wood I have found the best treatment to be, first, a liberal coating of *thin* creosoted oil, then a further coating of thicker oil, and, finally, a good coating of (any colour) Oxide paint.

The "runners," along which slide the "bob-hole doors," should be on the outside of the building, not screwed on the inside, as the ledge so formed invites the oozing of water, the accumulation of snow, and so forth.

These, maybe, are only small items in a way, but they are so frequently travestied that a little reminder won't fall amiss; if it does I crave my reader's pardon.

With regard to the inside fittings, the main thing is *plenty of clean, dry litter,* on a *dry base of wood ashes* of similar material.

After reading Professor Thomson's articles (you will remember that he is of the Hawkesbury University College, Sydney) it is difficult to say what should, or should not, be allowed to find place inside the house. He says no perches, dropping boards, or any furniture whatever, that there is no necessity for perching fowls, but that three feet of litter is none too much. Well it appears to me that if the Professor's *practises* are the reason for the excellent average record of Australian fowls—but it remembered, far greater than the average English poultry farmer's—it's high time something were done to try and establish proof *right here* and *right now*.

I wonder, sometimes, if we are a little, just a little, *conservative*.

Professor Thomson is a man who has had considerable experience with poultry, having during the course of his time had dealings with no fewer than 500 different varieties of birds and over 7,000 crosses. So without condemning the Professor's statements right away, it would be as well to carefully weigh up for ourselves the purport of what he says, and how far we are bound to accept the truth underlying his suggestions.

Firstly, have we, generally speaking, sufficient depth of litter in our houses? It is very questionable whether most of us exceed seven or eight inches at the outside. Secondly, to what extent does all the internal equipment of our houses hinder the natural tendency of induced ventilation? Those of my readers who are at all familiar with the various systems of ventilation in use down the coal mines, and other subterranean works, know that frictional resistance to the passage of air responsible for a loss, in many cases, of one-half the initial efficiency of a current.

What are dropping-boards but wholesale air-breakers and breeding grounds for parasites? If *sufficient* litter is put on the floors does a droppings-board become an indispensability? If not, why use one?

But here we will stop, for clearly I have digressed; yet it will pay us to "bide a' wee," lest, in our anxiety to progress, we defeat our own ends.

LAINDON LAYING TEST. 1925-1826. FIRST REPORT.

Section 1. Light Breeds (Five Pullets).—J. Willis (An.), 63 eggs; Miss N. Grubbe (W.L.), 48; Rowland Cook (W.L.), 54. Monthly Certificate: Miss N. Grubbe.

Section 2. Heavy Breeds (Five Pullets).—L. Potter (R.I.R.), 65; F. Freeborn (R.I.R.), 61; Rowland Cook (R.I.R.), 57. Monthly Certificate: Rowland Cook.

Section 3. Light Breed (Single Bird).—G. L. and H. B. Gibson (W.L.), 26; S. Stock (B.L.), 21; A Walbank (W.L.), 21. Monthly Certificate: G L. and H. B. Gibson.

Section 4. Heavy Breed (Single Bird).—W. Dillenz (R.I.R.), 29; H Bush (R.I.R.), 26; Miss N. Grubbe (R.I.R.), 26. Monthly Certificate: H. Bush

Section 5. Gift (Any Variety).—W. Dillenz (R.I.R.), 26; E. Mylrea (R.I.R.), 16; H Bush (W.L.), 15. Monthly Certificate: W. Dillenz, also first-class for best bird in test.

THE "SERIAL" LAYING TEST, SKEGNESS. FIRST MONTH.

Exhibition (Standard Bred) A.V. Section.—E. Thomas (W.Br.), 36 eggs: S Outhwaite (Ex. L.), 31; Mrs. W. W. W. Butt (Bf. R.), 18.

Rhode I Red Section (Six Pullets).—Mrs. D. E. Greenslade, 65; J. W. Potts, 51; Mrs. E. Gossage, 43.

White Wyandotte Section (Six Pullets).—R. A. and A. M. Johnson, 111; Mrs M. Crookes, 76; H. Lee, 74

White Leghorn Section (Six Pullets.—F. C. Tomlinson, 90; Capt. F. C. Collins, 88; W. Mason, 83.

Black Leghorn Section (Six Pullets).—Capt. N. Zambra, 89; F. C. Tomlinson, 57; N. S Robinson, 16.

Any Other Variety (Six Pullets).—T. Leyson, (Bf. R.), 61; F. C. Tomlinson (I.S.), 47; S. H. Brooks (An.), 42.

Small Breeders' Section (Single Bird). A.V. Heavy Breed. — Mrs. W Thompson (Bf. Rk.), 26; Mr. and Mrs. T. J. McMillan (R.I.R.), 24; W. H. Brown and Sons (W.W.), 21.

Small Breeders' Section (Single Bird). A.V. Light Breed. — C. Gresley (W.L.), 19; C Cummings (W.L.), 19; J. Hart (W.L.), 17.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

LIGHT OR HEAVY BREEDS.

Capt. Seed writes:—

"Dear Sir,—In your Editorial of last week's issue of "Eggs," with reference to your White Leghorns. I am rather in a quandary. I, with my very limited knowledge, and purely a novice, think that the White Wyandotte beats it, for the simple reason that, the egg strain of both breeds being equal, you make more of your cockerels. I did not start hatching until the beginning of March, and continued until the end of April, and fed to your excellent formula on feeding, to which I have carried out to the letter. I have now 50 per cent. of my pullets laying, and should have stated that I now breed nothing but White Wyandottes. Will you please tell me if I am wrong, i.e., if I should keep two breeds—heavy and light?"

I am as much in a quandary as Capt. Seed. My own inclination is towards the heavy breed as a more economical fowl.

In spite of Mr. Morrison's remarks, I should be inclined to think that the profit from R.I. Reds, as an example, or Wyandottes run commercially would be greater than from Leghorns.

I know all the arguments as to broodiness and increased cost of food, which I did not mention previously, but my experience is that a hen which is broody in the spring will compensate for this by putting up a good record in August and Septembe when eggs are dear. Also, by careful selection believe the broody character can be eliminated. However, it is a point on which one dare not dogmatise, so I leave it to my readers for thei opinions.

BUFF ROCK v. RHODE ISLAND RED.

I have been asked by a member as to what believe the better of these two breeds. He wants them for an exposed position, and wishes to know which would best suit his purpose. There ar followers of both breeds, and I have no doub that each could put up a good case for thei favourites. Personally I feel there is nothing t choose between them, each has pretty much th same good utility characteristics, and it is matter of choice, not on merits, but of one's liking. I have found the Buff Rock very hardy, a fin winter layer of large eggs, a fair table fowl, an no more addicted to broodiness than the othe sitting breeds. I have always been surprised tha thev have been so slow in making their way into popular favour. They seem to have lost a little ground when the Rhode arrived, the latter was "boomed," and the Buff suffered, but there is no doubt that it is coming into its own now.

"CLOSE BONES."

I have received the following letter from Mr. J. Shepherd :—

> 'Just a line or two re the following, which appeared in last week's issue of "Eggs" :—
>
> 'When will judges understand that a close-boned bird will breed as good stock as one with capacity?'
>
> As an experiment, last season I mated the closest-boned bird out of 60. White Leghorn cockerels to nine moderate hens. The pullets are laying extraordinarily well, large-sized eggs. I should have been afraid to offer the cockerel as a stock bird on account of his closeness of bones."

We are, of course, referring to the male bird ere. While no experiments have yet been made as o whether the close or wide boned bird will breed etter layers, we know that the majority of the Black Orpingtons in Australia, who sired the ecord hens, were close boned. Many a good sire as been lost through the fact that utility judges without any reasons condemn a close-bone male.

SOME CONFUSION.

Comments in recent issues on the extravagant omparisons made between conditions in Australia nd in this country by Professor Thomson, of the Iawkesbury College, Sydney, have unfortunately een understood to refer to Professor Willard Thompson, Director of the National Poultry nstitute.

I can only express my very deep regret at this, nd at the same time say how very astonished I m that this confusion should have been possible.

No one who knows Professor Willard Thompson ersonally would connect him with the absurd tterances indulged in by our visitor from Ausralia, who has been telling them in South Africa hat we are 100 years behind the times.

FOOD PURCHASE SCHEME.

We are pleased to add this week one r two additional centres for food supplies, and e note with satisfaction the ever-increasing nquiries from more and more members regarding he scheme.

PRICES OF MASHES, ETC.

The following meals can be supplied in 5 cwt. ts and upwards of one kind free on rail :—

Fish Meal (Pure White)	**20/0**	**F.O.R.**	**London.**
,, ,, ,, ,,	**20/0**	**F.O.R.**	**Bristol.**
,, ,, ,, ,,	**19/0**	**F.O.R.**	**Swansea.**
,, ,, ,, ,,	**19/3**	**F.O.R.**	**Tynemouth.**
,, ,, ,, ,,	**19/9**	**F.O.R.**	**Grimsby.**
,, ,, ,, ,,	**19/3**	**F.O.R.**	**Bradford.**

PRICES OF MASHES. Per Cwt.

	Layers.	Growers.	Breeders.
F.O.R. LIVERPOOL	11/9	11/9	12/3
F.O.R. LIVERPOOL	12/3	12/3	13/9
F.O.R. LONDON	11/6	11/6	12/3
F.O.R. LEITH	10/9	10/6	11/9
F.O.R. LEICESTER	11/0	11/0	11/9
F.O.R. GREENOCK	12/0	12/0	13/3
F.O.R. KING'S LYNN ...	11/6	11/6	11/9
F.O.R. BELFAST	12/9	12/6	12/9
F.O.R. BRISTOL	11/9	11/9	12/9
F.O.R. SOUTHAMPTON ...	11/9	12/3	12/3
F.O.R. PLYMOUTH	12/6	12/9	12/6
F.O.R. ABERDEEN	12/3	11/9	13/9
F.O.R. HARROGATE ...	12/9	12/6	13/6
F.O.R. GLASGOW	12/3	12/3	12/9
F.O.R. STAFFS	11/9	11/9	13/0
F.O.R. SUSSEX	11/6	11/6	12/6
F.O.R. IPSWICH	11/6	12/9	12/9

Sussex Ground Oats F.O.R. London: 13/6 per cwt.
,, ,, ,, F.O.R. Sussex: 12/6 per cwt.
,, ,, ,, F.O.R. Bristol: 13/0 per cwt.
Alfalfa Meal ... F.O.R. Bristol: 14/- per cwt.

APPLICANTS FOR MEMBERSHIP.

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Passman, J. W., 8, Denton Row, Denholme, Bradford.

The Poultry Housing Factor and Winter Egg Production.

By **PROF. WILLARD C. THOMPSON,**
Director of the National Institute of Poultry Husbandry,
Newport, Salop, England.

It is with the keenest sort of appreciation of the privilege extended to me to-day in this invitation to address Scottish poultrymen that I have made this trip northwards to this ancient and noted City of Edinburgh. Just to once more see Edinburgh would be quite enough to make it easy for me to accept the invitation given to me, for in my travels through many countries I have rarely found a more charming and wonderful city than this, and I have seldom found a more splendid country than this, your own Scotland. A countryman of mine chanced to meet a countryman of yours down London way. The Scotchman asked what part of the world the other fellow came from, and received the reply that "I come from God's own country." Immediately the answer, "But, mon, ye hae lost your accent, I fear." I am glad to have the pleasure of talking over poultry-keeping with you.

Wherever poultry is being kept, either for profit or pleasure, be it one side of the ocean or another, there is very much the same objective running through the minds of those who are taking part in that industry. To get a sufficient egg production during the course of the year to render a reasonable profit on time and money and labour expended is the central idea with us all. Egg production, as I see it, is really the basis of success in poultry-keeping everywhere. No branch, however specialised, of the great poultry industry can permanently continue to succeed unless the egg producing side of the industry is constantly held up to high and profitable standards.

In attempting to arrange the management of our egg laying flocks in a way to enhance the chances of a profitable egg yield during the course of a year's business, we find that in most climates our methods and practises must be tempered and altered according to prevailing weather conditions. In short, we always run up against the well-known fact that when natural conditions are such as to stimulate egg production to highest figures that the same thing is occurring almost universally. The supply of eggs is great and the price falls. There is usually a rather clear-cut relationship existing between supply of eggs and the prices therefor, an illustration of the law of supply and demand. As poultry producers we must be guided accordingly. In seasons of more unfavourable weather conditions, such as during prolonged winter seasons, it becomes increasingly difficult to obtain high egg production records. It is mainly for this reason that we have come to value so tremendously winter egg production as a characteristic to be bred into our fowls or coaxed from them by right care and management

It is my principal duty to-day to deal with th influence of poultry housing on winter egg production, and I shall proceed on the premise tha if we can secure a satisfactory winter egg recor that the egg yield for the other and following seasons of the year will essentially take care o themselves. But, if I may assume the usually claimed right of the speaker to digress from hi assigned subject now and then, I would like t suggest to you a line of thought which I have bee studying most carefully during recent months. I it is true that the winter egg production of ou laying flocks is so very important from th economic and commercial viewpoint, then it migh possibly be that if we knew something more o the relationship existing between that winte season record and the total year's record we woul be able to cull or select our laying flocks, especiall when it finally comes to the determination of th breeding hens, with greater accuracy, as well a eliminate those fowls whose winter records giv warning of their low productive capacity. Prof Hervey, late of Rutger's University, in America who was for several years my first assistant an close associate, as well as valued friend an adviser, has made a most laborious and detaile study of the relationship existing between short time seasonal records and full-year totals. H has used the records, actual trapnest records, o many hundreds of hens, taken from official layin trials data, and has evolved the formulæ which am about to give you only after vast and carefu study. He and I have been intensely intereste in this subject, and since I have been on this sid of the water I have been interested to find tha practically the same relationship seems to exis here between winter egg records and total year's records as did in the American vicinity in whic the fowls were kept the records from which Prof Hervey used. I must make this story short. B comparing the winter egg records of hens wit their respective year totals it has been foun that a certain rather definite relationship doe exist between them, and that if the winter eg record was known the other, or the year total might be predicted with considerable certainty an a good deal of accuracy. Hervey has given u this in a formula which I thought you might b interested to have. If we may let Y represent th total year's egg production record which we wis to predict, and if we let X represent the know egg production record for the winter period, including November through February, then $Y = 1.411X$ plus 116.8. For example, if we find pullet, in her first winter season, lays 40 eggs then, according to this simple formula, we predic that she will finish her first or pullet laying year with a total egg record of approximately 173 eggs Now, the application of this formula has bee very, very useful to many poultry breeders, for begins to answer an often-asked question as t the possibility of trapnesting pullets for the fir winter season, when time is more available than during the spring and subsequent parts of the poultryman's year, and basing one's estimate of the capacity of a pullet as to egg production on that winter season record. I have personally applied it to hundreds of actual known trapnest records during recent months, and I have found in that experience that I have always come practically within a dozen eggs of the actual year's total by using that formula, and I submit that if we can come within a dozen eggs of knowing the year's total egg production record by trapnesting only during the winter season, and using that record as a basis, that in many instances we have discovered a great aid and help. We must always carry a certain number of hens straight through the whole year under the trapnests, but possibly we need not carry as many as we have been doing if this relationship between winter production and total year's production holds with some degree of accuracy.

Just one more comment on relationships! Hervey also studied the relationship between a hen's first year egg record and that of her second year. This formula has been most helpful to poultry breeders in classifying their pullets which finished their first year of egg production into flocks or matings for use as breeders during the following year. Very briefly, the situation is found to be Y (the second year predicted record) = .4865 × plus 55.51. The pullet whose record we just predicted according to the known trapnest record of her first winter, 173 would, we predict, lay something like 140 eggs during her second laying year. It is a guide as to whether or not to keep the fowl.

(To be Continued).

Correspondence.

VENTILATION.

Dear Sir,—As a reply to "Criticus'" letter in "Eggs" of November 25th, criticising my article will no doubt be expected, I will try and explain my points as they are written, and not as he has chosen to interpret them.

I do not anywhere in my article even imply that the poultry stock of this country is in a very bad way. It would be foolish to do so.

Taking houses and hovers in general, I think it is safe to say that as such a large number of different designs give, at times, satisfactory results, we are still some way from the perfect design in either case.

Apart from feeding and absence of disease, I account for the perfect health of a large number of flocks where houses are not scientifically sound by locality. It is here that the majority of makers mislead the public. I have been on a farm under the lee of the Sussex Down, where the lean to type is a success. When I first came to my own farm I built identical houses, only a good deal heavier. When the winter gales came I found that it was quite impossible to keep them on the ground. The owner of a farm not far off was very pleased at the time because one of his lean-to houses had been moved bodily, forty yards, and had never come adrift, so well built was the house. I prefer a house slightly less well built that will keep in position, and at the same time be perfectly ventilated. Because these houses are a success in one place, it does not say that they will be in another. Many a beginner has lost a lot of capital by installing the wrong type of house. I am sure that some of your readers will bear me out in this statement.

I nowhere imply that the records of some flocks will be surpassed or even improved upon by a change of house. I certainly maintain, provided feeding is right, that with improved ventilation to the houses, many flocks throughout the country would show a better record. I do not advise people to scrap their existing houses anywhere in my article. It was new houses that I was dealing with.

Perhaps "Criticus" would be kind enough to publish a sketch of the "Apex" house that he scrapped years ago, and we will see if it anywhere, except in general shape, resembles the Apex House exhibited at the Dairy Show.

The house referred to above does not need to have the wind in any particular direction. I think that this point must be a slip on the part of "Criticus."

I do not necessarily advocate the "Apex" house (span-roof type can be ventilated very nearly is well), but, as far as the sight of them is conerned, I do not see that that need be a drawback. Nobody was very disgusted when the "cigar" ype ship was built to escape the Suez Canal ues. As a matter of fact, "Apex" houses are re not bad looking at all.

(Continued at Foot of Previous Column).

As I carefully explained in my article, "The mportance of Proper Ventilation," of July 29th, ecause a ridge ventilator is fitted that does not make it an automatic ventilating house.

I should like to say that none of these theories hat I have expounded are my own. They have een established facts for at least thirty years. . visit to modern hospitals, barracks, cavalry and rtillery stables, and good race-horse stables, will emonstrate that "Ventilation by Induction" is he system employed where possible. Also with he hover, I did not say that no inlet for fresh air as provided. It was the position of the inlets nd outlets that I remarked upon. I again refer m to my article of July 29th for the difference etween an induced current and an in-current.

Yours faithfully,

P. S. CAMPBELL.

MARKET REPORT.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, DECFMBER 11th, 1925.

GRAIN AND FEEDING STUFFS.—British wheat continues to advance in price, an active demand being experienced; the average rate per cwt. is now 12s. 11d., against about 12s. 4d. last week. There is a fair business in imported wheats and these also sell at advanced quotations. The demand for home-grown malting barley is very slow, although recent prices are nominally unchanged, but feeding sorts attract rather more attention. Imported barleys are also more inquired for at hardening rates. English oats meet a fair inquiry, especially for "whites," and prices are firmer, while imported varieties are again in limited supply and dearer. Offerings of maize are on the short side and a steady business is reported at a little more money.

The recent improvement in the demand for millers' offals is maintained. Bran and pollards have again advanced slightly, but "thirds" are reduced at Liverpool. Meals are in moderate request and barley and maize products are generally the turn dearer, other meals being about unchanged. Rather more inquiry is noticeable for linseed cakes and quotations are firm, but cotton seed cakes have declined at all markets except London.

MILLERS' OFFALS.—Bran (British): Bristol, £8 17s; Hull, £7 17s; Liverpool, £8 10s; London, £8 2s. Broad Bran: Hull, £9 7s; London, £9. Middlings—Fine (Imported): London, £9; Coarse (British): Bristol, £9 7s; Hull, £9; Liverpool, £8 15s; London, £8 5s. Pollard (Imported): Bristol, £7 17s; Hull, £6 15s: Liverpool, £6 15s; London, £6 17s. Rice Bran: Bristol, £7 10s; Liverpool, £7 2s.

MEAL.—Barley Meal: Bristol, £10 10s; Hull, £9 17s; London, £10 5s. Maize Meal: Bristol, £11 10s; Hull, £10 3s; Liverpool, £10 2s; London, £10. Maize Meal (S. African): Bristol, £9 17s; Hull, £8 10s; Liverpool, £8 12s; London, £9 2s. Maize Germ Meal: Hull, £10; London, £9 15s. Maize Gluten Feed: Bristol, £11; London, £9 12s. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 10s; London, £9 12s. Bean Meal: Bristol, £13 10s; Hull, £11 13s; London, £12 5s. Fish Meal: Bristol, £21 10s; Hull, £20 10s; Liverpool, £20; London, £20.

EGGS AND DEAD POULTRY.

English eggs are now being marketed in increased quantities, while supplies of imported descriptions are ample for all requirements. The high prices recently ruling for best samples checked the demand and values in consequence were lowered, but with no improvement in the trade. Secondary varieties remain fairly firm. Dead poultry are plentiful, especially turkeys, which are freely offered at reduced prices. Other descriptions sell at about late rates.

Week-end Prices—Eggs (per 120): British, 33s 6d; Irish, 32s 6d, 31s 0d; Danish, 34s 6d, 33s 0d, Dutch, 31s 9d, 30s 0d; French (brown), 32s 9d, 31s 0d; French (mixed), 28s 9d, 25s 9d; Belgian, 31s 6d, 30s 0d; Italian, 26s 6d, 23s 6d; Egyptian, 11s 6d, 11s 0d; Lithuanian, 19s 6d, 17s 6d; Polish, 17s 0d, 15s 6d; Chinese, 15s 6d, 14s 0d; Russian, 17s 6d, 14s 6d; Australian, 25s 6d, 24s 6d; Styrian, 20s 0d, 19s 0d; Argentine, 17s 0d, 16s 0d; American, 18s 9d, 18s 3d; Californian, 22s 0d, 21s 0d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 5d, 1s 2d; Irish, 1s 2d, 1s 0d; Others, 1s 3d, 1s 0d. Ducks, 1s 2d, 1s 0d. Geese, 1s 0d, 10d. Turkeys, 1s 4d. 1s 1d.

EGGS.

Per Doz.—Ashford: First, 3s 3d; Second, 3s 0d. Birmingham: First, 3s 8½d; Second, 3s 2½d. Bridgwater: First, 3s 3d; Second, 3s 0d. Chelmsford: First, 3s 7¼d; Second, 3s 2½d. Colchester: First, 3s 6d; Second, 3s 0d. Doncaster: First, 4s 0d; Second, 3s 10d. Dorchester: First, 3s 1½d; Second, 2s 11¾d. Exeter: First, 3s 6d. Hereford: First, 2s 9d. King's Lynn: First, 3s 0d; Second, 2s 9d. Llandilo: First, 3s 6d; Second, 3s 3d. Mold: First, 3s 9d; Second, 3s 6d. Montgomery: First, 3s 0d. Newport (Mon.): First, 3s 6d; Second, 3s 3d. Norwich: First, 3s 8d. Oswestry: First, 3s 5d; Second, 3s 3d. Penzance: First, 2s 8d; Second, 2s 7d. Saffron Walden: First, 3s 4¾d; Second, 3s 0d. St. Ives (Hunts): First, 3s 3d; Second, 3s 1d. Salisbury: First, 2s 10½d; Second, 2s 9d. Skipton: First, 3s 8d. Truro: First, 2s 7d. Welshpool: First, 3s 8d; Second, 3s 4d. *Carlisle: First, 3s 6d. *Derby: First, 3s 5d. *Ipswich: First, 3s 6d. *Lincoln: First, 3s 9d. *Shrewsbury: First, 3s 6d; Second, 3s 3d. *York: First, 3s 8d; Second, 3s 7d.

FOWLS.

Per lb.—Birmingham: First, 1s 2d; Second, 9d. Doncaster: First, †5s 3d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 7d; Second, 1s 4d. Newport (Mon.): First, 1s 6d; Second, 1s 2d. Truro: First, 1s 4d. Welshpool: First, 1s 6d; Second, 1s 4d. *Derby: First, †5s 6d; Second, †4s 0d. *Ipswich: First, 1s 5d, Second, 1s 4d. *Lincoln: First, †5s 6d; Second, †3s 6d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 0d; Second, †4s 6d.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: First, †6s 0d; Second, †5s 0d. Exeter: First, 1s 2d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 7d; Second, 1s 4d. Welshpool: First, 1s 5d; Second, 1s 3d. *Derby: First, †5s 0d; Second, †4s 0d. *Ipswich: First, 1s 4d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 6d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head.

"*Eggs.*"

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, December 16th, 1925.

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Contributions.—The Editor will always be pleased to consi contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence "Eggs" to their poultry-keeping friends.

Subscriptions to "EGGS," 12s. 8d. per annum; 6s. 4d. for months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, Beeches, Rudgwick, Sussex.

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Classified Advertisements Rates will be found at top of first p of classified advertisements.

XMAS HOLIDAYS.

For our issue, dated December 30th, we sh be closing for press one day earlier than usu New advertisements and alterations of copy that issue must therefore reach us on or bef FIRST POST THURSDAY, DECEMBER 24th.

Scientific Poultry Breeders' Association.

EAST DEVON BRANCH.

The Second Annual General Meeting and Dinner, follo by an Invitation Dance, will be held at Trumps' Cafe, Sidmo on Thursday, January 7th, 1926. General Meeting at 6.45 Music will be supplied by the Blue Lagoon Band. A por of the proceeds will be allocated to branch funds, the remai being devoted to a cup presented by the branch for competi at the County Laying Trials. The cup will be presented representative of the County Authority by the Vice-Presiden the dinner. You are particularly requested to support the in try and your county by making every effort to attend. There some important questions to be dealt with at the General Mee which affect every poultry farmer. Application for dinne dance tickets must be received not later than December Tickets: Dinner, 5s. 6d. each; Dance 5s. 6d. each.

Capt. H. JELLEY, Hon. Sec., Broad Oak, Ottery St. M
'Phone: 40 x 2 Ottery.

E G

EGGS

THE OFFICIAL ORGAN OF THE SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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Vol. XII. No. 26. Copyright.

Edited by TOM NEWMAN.
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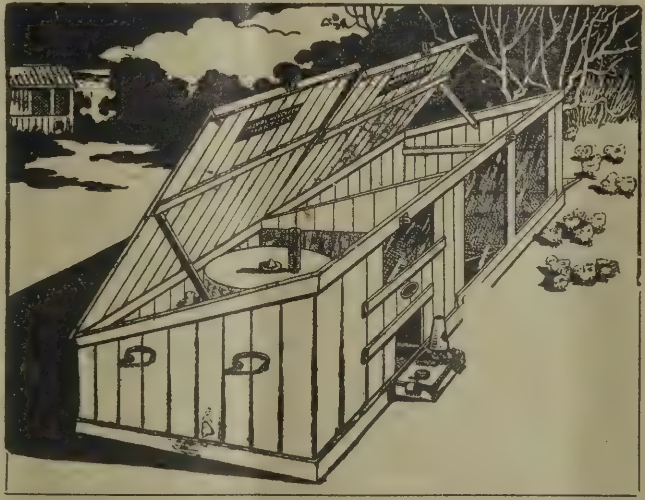

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For Egg Production.

ANOTHER TESTIMONIAL.

3rd December, 1925.

Dear Sir,

The two cockerels you sent appear to me to be excellent in appearance, and I have no doubt they will prove satisfactory.

Yours truly,

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PRICE OF COCKERELS

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SANDOWN, - - I.O.W.

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The "Heydown" strains are the SAFETY STRAINS by reason of the fact that they are the result of many years continuous trap-nesting of 2,000 pullets and hens. In addition to this, all breeding stock at "Heydown" has been tested by qualified bacteriologists, and shown negative results for B.W.D.

JOHN H. DOWDEN & SON,
"Heydown," Heathfield, Sussex.

WASTEFUL ECONOMY.

A WELL managed poultry farm should be run on close figures, every sort of costings should be available. The principal items requiring watching being labour, food and plant. Labour can be kept low by systematic management and suitable housing; feeding errors are getting scarcer, but food may be wasted by unsuitable methods of distribution—a bright house will prevent this. Wrong housing will entail a great deal of extra costs by way of upkeep, and stock will not thrive. LOW EGG YIELD and BAD REARING are the surest indication of faulty plant. DON'T BUY FROM NICE ILLUSTRATIONS or AIRY CLAIMS — DISCRIMINATE and investigate such claims.

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All-Purpose House. 60ft. x 15ft. for 250 culled Pullets. "suitably" ventilated, independent of open ridge or windows, completely equipped, including foundations, £130.	Other make of similar floor space but cubically less, Lean-to. ¾-Span. Cabin or Army Hut type. Appr. £120.

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RESULT: Attained continuous average egg yield from 250 culled Pullets ... 208 Eggs.	Maximum known average from between 150 to 170 Eggs. varying.

Difference 25 per cent.

Difference 40 eggs per bird x 250 = 10,000 Eggs. at 2½ pence = £100 per season.	£100 short in egg yield every season for a first saving of £10.

COMPARATIVE TESTS AS APPLIED TO BROODING REVEAL EQUALLY ASTONISHING RESULTS

Even better figures from authentic sources will shortly be published.

MENTION "EGGS."

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EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association
WEDNESDAY, DECEMBER 23rd, 1925.

Editorial.

BREEDING FOR PRODUCTION—Continued.

May I mention here this question of Precocity gain? The advice is often given to select ose cockerels for mating which are the earliest start crowing. There is some truth in this lvice, but there is also need for a little caution. any of these very precocious cockerels fail to velop bodily, just as a pullet does which matures rly sexually. They frequently break down ring the breeding season and fail to fertilise the gs. Moreover, the chicks from such males are ten very weakly. The breeder must always oid extremes.

Now I am going into the question of Line-breed- g and In-breeding as against Out-breeding.

Years ago the usual advice to those who wished breed for heavy egg production was to buy a ale of another strain. Then another school ose, which argued the crossing of strains caused treme variation and was most undesirable, so were all advised to breed **within** the strain.

Then came those who contended that Line- eeding was essential, and Line-breeding has in ny cases led to In-breeding, which, after all, is t Line-breeding carried to its limits.

By Line-breeding we mean the restriction of the ting to one single line of descent, and its fol- vers tell you that its real object is to "fix" sirable characters.

That word "fix" conveys rather a false idea. reality, having selected for a specific character, characters—say egg production—our object is prevent the introduction of others which are ely to prove dominant to those on which our ection has been based. For example, we have ked with heavy egg production, the characters, ly maturity, fast rate of winter production, t rate of spring and summer production, fast e of autumn production and non-broodiness.

Now if we depart from our line which we have d "pure" for these characters for several erations, the argument is that we may intro- e such characters as late maturity, slow rate winter production, slow rate of autumn pro- tion, and broodiness, which would render high egg records impossible. It is our object, when breeding, to avoid as far as possible, wide variation. We get variation because the individual is the product of two others, and necessarily partakes of the characters of both, and so differs from either. Now I am coming to a point on which you may disagree with me. I am going to ask whether line-breeding is advisable, and whether it is necessary for heavy egg production. In my opinion it is not, although I quite appreciate that the mating of two closely-related individuals, even sire and daughters, may at times be not only useful, but advantageous; and you will, no doubt, have plenty of evidence which you think may justify line-breeding.

You will agree with me that only an experienced breeder should attempt it, and even he must keep his eyes open for the first sign—not that he has bred too closely, for if you have **exceptional** individuals you need not worry much about their relationship, but of the inclusion of an **inferior** individual, which would wreck the whole line.

We are faced with certain difficulties incidental to egg production, which I venture to say are sufficient to demonstrate that line-breeding as a system of breeding where heavy egg production is concerned is not only inadvisable but positively dangerous. There is the tendency to lose body size, size of eggs, to soft bone and loss of vigour, and the great danger is that the trap-nest record is generally the deciding factor.

If we take the question of soft bone, which is undoubtedly inherited, I have records of the progeny of hens, all of which have had this tendency. It is the soft bone which is inherited, and not the crooked breast bone. I have made some effort to trace this, and discovered that they were all high record hens, and the suggestion is that they were precocious as pullets, with the result that the lime which should have gone to the making of bone was eliminated in the egg. The whole question demands serious attention. I believe it has a great bearing on the dead-in-shell problem. When line-breeding we intensify all those difficulties, and we should remember that **line-breeding does not lead to breed improvement. It is the continuous selection of the superior individual which it necessitates, that leads to breed improvement.** The question is, whether it is necessary or not; the object in view being egg production. I say most emphatically—No!

Your purpose in line-breeding is to keep your strain pure for a particular character or characters. These factors in egg production are:—

(1) Early Sexual Maturity. That is to say, when the first egg is laid.
(2) Fast Rate of Winter Production.
(3) Fast Rate of Spring Production.
(4) Fast Rate of Autumn Production.
(5) Non-broodiness.

The first three of these are dominant characters, the last two are recessives. Thus, if you mated one which carried the character of **non-broodiness,** which is **recessive,** and the other **broodiness,** which is **dominant,** broodiness would appear in the progeny. The same thing would occur with the recessive rate of autumn production, and the dominant slow rate; the progeny would carry the factor slow rate, with the result that you could not get high records in the progeny.

That is why I ask if line-breeding is necessary, because if you cross two strains, or even two breeds which have been "bred" pure for these five characters, then it seems to me that it is not necessary, because you would not introduce the undesirable characters, as neither parent would carry them. Of course, you would have to be acquainted with the history of every individual in the pen. If I am right, then line-breeding with its attendant risks is not necessary, and I think it will make a very considerable difference in the vitality of our stock. The first cross test at Bentley should give us some data in this respect, but the S.P.B.A. intends to make a test on its Experimental Farm the next season which should prove convincing.

Felch's chart is often referred to by the advocates of line-breeding. In reality it involves two systems of in-breeding, which is line-breeding carried to its limit—viz., the dam to her sons; the sire to his daughters. The remaining form of in-breeding is brother and sister. The chart is useless to breeders for egg production; it is dangerous because one is too apt to breed by chart and leave the selection of the individual. One of the questions which I am asked most frequently is, "Do you believe in line-breeding?" The answer to that is—No. The other question is, "How close can I breed with safety?" It is not a question of how close; you will be safe even with brother and sister if you have two really exceptional individuals, and unsafe with two second cousins if they are inferior. But you must be clear as to what constitutes the exceptional.

It is said that line-bred stock is more prepotent than stock which is not line-bred. This is true and is capable of explanation, but I doubt whether we have proof that it is more prepotent than unrelated stock which have been bred exclusively for certain specific characters for several generations.

If you are breeding for heavy egg production do not hesitate to go outside your strain, but be sure of the pedigree of the individual which you are getting, and do not mate him until you are perfectly satisfied with this, and, what is equall important, be sure the external characteristic conform to the pedigree.

I am suggesting this because the more pr nounced these external characters are in the ma the more likely is he to have inherited the co stitution of the dam, and of course you will n buy a breeding cockerel without you have th record of the dam; if he does not exhibit the characteristics his inheritance is likely to be fro his more remote ancestors.

(To be Continued.)

THE NATIONAL UTILITY POULTRY SOCIETY.

NATIONAL EGG-LAYING TEST, 1924-25.

(Recognised by the National Poultry Council)

Final Report for the 48 weeks, from 1st November, 1924, to 2nd October, 1925.

For the first time since the tests have been conducted at Be ley a falling off in the average egg production per bird w recorded. It was hardly to be expected when dealing with su large numbers of birds that the high average obtained w smaller numbers would be attained, but the substantial falli off shown this year can only be attributed to a very sm extent to that influence.

The feeding and general management was on precisely same lines as in former years, and the fact that the records the leading pens in nearly all sections were quite up to standard of previous tests would certainly indicate that the fa does not lie in that direction.

The weather during the autumn and winter months, wh the falling off was most pronounced, was unusually wet a accompanied by much fog and long spells of east wind, so th the conditions were unfavourable to egg production. The at Bentley is an exposed one, and being only a few miles fr the North Sea it constitutes a somewhat severe test, but that only what it should be to thoroughly test the constitutio vigour, as well as the laying capabilities of the competing bi

A large proportion of the pens entered consisted of fine, w developed birds, typical of the breeds they represented, and w a credit to their owners.

But there were far too many pens of birds showing a gr lack of physical and constitutional vigour—a fact commented on their arrival. Many of these birds were undersized and a much too thin, for while a pullet reaching productive matu should not be fat, she requires a goodly covering of flesh to ca her through a winter's laying. As was to be expected, th birds proved indifferent layers, and were large responsible the lowered flock average.

This tendency towards loss of size was to be seen more less in all breeds, and should be carefully guarded against breeders, as it undoubtedly results in a corresponding decre in the number and the size of the eggs laid. On the other ha excessive size is equally undesirable, and the ideal to be ai at is the maintenance of the standard size of the breed.

Production was also adversely affected during the ea months of the test by moulting, which was unusually preval Pullet moulting continues to be one of the greatest troubles ing test managements have to contend with.

Turning to the several breeds entered, White Leghorns w represented by as many as 654 birds. These showed wide va tions in size, type, and constitutional fitness, and also in th laying capabilities. Some were extremely good in regard to those qualities and others were quite the reverse, and the gen average of production was disappointing.

In all previous tests at Bentley the White Leghorns have variably done well, and usually headed the list of avera whereas on this occasion they were beaten by several bre including the White Wyandottes, represented by 425 birds. latter breed, taken as a whole, has shown great improvem during the last two or three years, as the result of more car breeding, and it is gradually recovering much of its former p larity The Rhode Island Red and the Light Sussex breeds tinue to make steady progress, and are being represented by increased number of pens each year

There is, however, in some strains a very noticeable loss in the colour and the size of their eggs as well as in the b themselves.

A striking feature of this test was the fact that Mr. G Metcalfe's pen of Rhode Island Reds succeeded in winning championship against the very best strains of White Legh and White Wyandottes. This provides the strongest proof of importance of strain in the matter of egg production, an what can be achieved in that direction by selective breeding w carried out by a skilled breeder. Further evidence on this c tion of strain building is supplied by the steady improve shown year after year in the records put up by such breed the Black Leghorn, Ancona, Australorp and other breeds paratively new to the laying tests, and it may be stated ome degree of confidence that the winning of the championship y any of these breeds is quite possible through the skilful operaions of our specialist breeders in laying strains. It may also e pointed out that the average production in the Championship ection was 16 eggs per bird above that of the other sections.

If there is one point more than another that the laying tests ave succeeded in bringing home to the poultry-keeping public it s that fecundity is more a question of strain than of breed. This achievement alone justifies the existence and continuance of hese contests.

On referring to the egg production tables it will be seen that ome good pen records were made; the highest by Mr. A. K. Speirs Alexander's pen of White Wyandottes, with a total of 1,140 ggs, an average of 228 per bird. The best individual bird record vas 227 eggs, only five of which were below the 2oz. standard, tanding to the credit of a White Leghorn owned by Major F . Thorne.

The breed averages were headed by the Australorps with an verage of 176.2 eggs per bird—a striking and rapid improvement n the performance of the breed since its introduction into this ountry only a few years ago.

In regard to the size and character of the eggs which again re dependent on strain as developed by selective breeding rather han on breed, for by all the breeds represented in the test good nd bad samples were produced, but, speaking generally, there vas an all-round improvement in type of eggs laid This shows hat greater attention is being paid by breeders to this imporant point which, after all, only ranks second to that of numbers.

The general health of the flock was on the whole good, though here were several cases of diphtheria and chicken pox, but the utbreak quickly died out as the result of strict isolation and areful treatment. In the treatment of these diseases success argely depends on the promptness with which it is taken in hand t the outset.

LIST OF AWARDS AND RECORDS OF LEADING PENS.

Figures are Eggs and Points respectively.

Section 1. Championship. Ten Pullets.—G. B Metcalfe, 2086, 2082 (Gold Medal); Leslie Williams, 1999, 1935 (Silver Medal); Frank Snowden, 1864, 1862 (Bronze Medal).

Section 2. White Leghorns. Five Pullets.—Balsham Manor Farm, 1051, 1050 (Gold Medal); Mrs. K. Crawford, 1034, 1034 (Silver Medal); John Potter, 1017, 1016 (Bronze Medal); The Misses Ransford, 1028, 1015; Easton P. Farm (per Miss Kitchin), 1003, 1002; Brig. Gen. Kincaid-Smith, 999, 999.

Section 3. Black Leghorns. Five Pullets.—E. Watkins, 1022, 1022 (Gold Medal); Mrs. M. E. Clay, 965, 965 (Silver Medal); Roland Garrett, 963, 963 (Bronze Medal), W. P. White, 961, 961.

Section 4. Any Other Light Breed. Five Pullets.—Molassine Co., Ltd., 949, 945 (Gold Medal); P. K. Berry, 960, 931 (Silver Medal); J. H. Thompson, 859, 859 (Bronze Medal).

Section 5. White Wyandottes. Five Pullets.—A. K. Spiers Alexander, 1140, 1102 (Gold Medal); W. and T. Salt, 1042, 1042 (Silver Medal) Chisbury Poultry Farm, 1019, 1019 (Bronze Medal); Ralph H. Sewell, 999, 999; G. Keith Simmons, 1035, 994; J. T. Finn, 987, 987

Section 6. Rhode Island Reds. Five Pullets.—John H. Berry, 1092, 1083 (Gold Medal); John Beamish, 988, 988 (Silver Medal); Arthur Gawthropp, 1086, 987 (Bronze Medal); Armstrong Bros. and Blackwell, 980. 980. Lady Lilford, 989. 974; Wilson Beattie, 1019,968.

Section 7. Sussex. Five Pullets.—Mrs. E. M. L. Knight, 952, 952 (Gold Medal); P. Rossall-Sandford, 884, 884 (Silver Medal); Mrs. M. G. Alston, 893. 881 (Bronze Medal).

Section 8. Five Pullets.—W. C. Crosland, 947, 939 (Gold Medal); Mrs. Ward-Jackson, 938, 930 (Silver Medal); Mrs. M. Crookes, 911, 911 (Bronze Medal); Marchioness of Graham, 907, 907.

Section 9 Members N.U.PS. Two Pullets.—Mrs. F. O. Ward-Jackson, 461, 450 (Gold Medal); R. Lloyd George, 356, 356 (Silver Medal); George Hampton, 354. 354 (Bronze Medal).

Section 10 Team of Five Pullets.—Tottenham Utility Poultry Society, 816, 781 (Gold Medal); Bethnal Green Utility Poultry Society, 783, 759 (Silver Medal); Progress Utility Social Club, 702, 701 (Bronze Medal.

WINNERS OF SPECIAL PRIZES.

G B. Metcalfe: Pen 30.—"Daily Mail" Gold Challenge Cup and L.N.E.R. Cup for highest score first-grade eggs in first sixteen weeks. Championship section.

A. K. Spiers Alexander: Pen 185.—Lamaison Challenge Trophy. L.N.E.R Cup for highest average score and East Anglian Cup.

W. and T. Salt: Pen 241.—Sainsbury Challenge Cup for highest score first-grade eggs

J. T. Finn: Pen 207.—L.N.E.R. Cup for highest score first-grade eggs in first sixteen weeks of Test. Sections 2 to 8.

Mrs E. M. L Knight: Pen 336.—Walmsley Challenge Cup Sussex Section.

Major F. P. Thorne: Pen 114, Bird 724.—L.N.E.R. Cup for highest individual bird score, first-grade eggs.

Marchioness of Graham: Pen 360.—N.U.P.S Scotch Cup.

J. Beamish: Pen 263.—N.U.P.S. Welsh Cup.

Lady Anderson: Pen 127.—L.N.E.R. Cup for highest score first sixteen weeks of test

Lady Lilford: Pen 292.—J. N. Leigh Cup for highest score last two months of test.

A Year on a Poultry Farm.

By Lieut.-Colonel F. S. N. MACRORY, D.S.O.

CHAPTER V.

ARTIFICIAL LIGHTING FOR WINTER EGG PRODUCTION.

The winter egg is the money-making egg, and as we are all after money, we must consider very seriously the effect of artificial light for laying hens in this connection.

As early as 1912 I experimented with electric light in my one and only fowlhouse. This was a "Hanson type" laying house, 60 feet long by 10 feet wide. I was struck with the improved winter egg supply obtained by the use of artificial light, but my experiments were not carried very far at that time owing to the outbreak of war and the temporary stoppage of poultry-keeping on my part.

After the war, however, I had no hesitation in systematically installing electric light into every new or converted poultry house which came into occupation at Ardmore Poultry Farm. I have naturally made various experiments to determine the value of this artificial illumination.

About three years ago I tested two large pens of practically identical White Leghorn pullets against each other during the winter. The feeding, management and housing were all as nearly as possible the same in both cases, the only difference being that one pen had electric light whilst the other had not. The former pen did a twelve-hour working day during October, November and December, whilst the latter pen, of course, did no overtime. The egg results showed a balance in favour of the lighted birds of almost 33⅓ per cent. extra egg production during the dear months. I do not pay for my current, as I run my own water-power plant, but had I been paying at average rates I worked out that a shillingsworth of electricity would have yielded seven or eight times its cost in winter eggs.

The egg results in the case of older hens are at least as striking as in the case of pullets. During November and December I can get an average of nearly seven eggs a month per bird from "lighted pens," as against half that number from "unlighted pens." (The latter, I may add, are always my best selected birds, as they are the prospective breeders.) If a hen produces fourteen eggs in November and December, when the average value is about 3½d. per egg, a very simple sum will show you that she has laid, roughly, 4/- worth of eggs, as against 2/- worth from her sister who has remained in darkness. In each case the cost of feeding should be about 1/6 to 2/- per bird, so that it would appear that the lighting is amply justified as a commercial proposition.

Of course, you will not increase the total number of eggs laid in the year by each bird, as the "lit" ladies will fall rapidly behind their more natural sisters when the days begin to lengthen.

Many people condemn this artificial lighting as being "forcing." Personally I cannot see why it should be so, as its effect is really only to alter the **season** of laying a little. In fact, though I have so far religiously kept my prospective breeders in the dark, I am beginning to query the necessity of this. Supposing I treated them in the same way as the commercial egg producers, what would be the result? In the first place, I should make a handsome profit from their winter eggs instead of running them at cost price. In the second place (and this is the important point from the breeder's point of view), I should undoubtedly get fewer eggs per bird in the early spring when I wanted the eggs for hatching. Ah, but **might** not the eggs that I did get be those from the very superlative layers—the birds that could stand the strain of the winter egg output and carry it on into the spring and summer? That is a point well worth considering. In fact, I have almost convinced myself, and I think I shall forthwith try it. Of course, there is one little fly in the ointment—I shall have to mate up far more birds than usual in order to get sufficient hatching eggs when wanted. But even then it strikes me as a sound commercial proposition.

Apropos of mating up, I have made a rather interesting experiment this autumn. I have introduced one young (Wyandotte) gentleman of excellent pedigree to a harem of twenty old Wyandotte ladies. I have had several hatches (under hens) from the resulting eggs, and have found the fertility nearly 100 per cent., and the hatchability fully 80 per cent. The moral seems to be—don't waste your money on too many cockerels; buy a few really good ones and give them plenty to do. It's wonderful what these young gentlemen **can** do, if you give them a chance.

I must not close this chapter without a word of thanks to the correspondent who sent me particulars as to "HOW TO BURN A HEN." I give the recipe herewith. Its only demerit is that one has to buy a boiler to begin with, and, apparently, one has to take a hot bath after each operation ever afterwards. The whole performance, therefore, appears to involve a certain amount of time, which is sometimes hard to spare. But what of this if one really does succeed in reducing the "all too solid flesh" to a handful of white dust which can be scattered to the four winds of heaven with a pious benediction?

Recipe follows:—

RECIPE FOR BURNING OLD HEN OR COCK.

Ingredients: 1 Beacon boiler or similar contrivance, containing 1 medium fire, 1 or more old hens.

Method: See that the fire is in good condition. Place hen in middle of it, open dampers. Then meditate on joys of poultry farming for half a hour. Go and have a hot bath—the resulting wate will surprise if it does not scald you, and life wil assume a rosier hue.

Let's hope so, anyway.

Later.—Since writing the above I have had letter from a correspondent who wishes for information as to how I arranged my "jam-jar pyjama cord" moisture device on the Glouceste incubators.

As this device proved quite moderately successful, I give the details below.

Procure four medium-sized glass jam jars fo each incubator to be fitted up. Fix these near th four lower corners of the incubator by means o brackets or straps. Bore four ½ in. holes throug the incubator, two on each side about equidistan from the front and back respectively. These hole should enter the inside of the incubator about ½ in above the upper sacking diaphragms, which shoul be removed for this purpose. The sides of th Gloucester consist of 3-ply wood inside and outside, packed with an inch or more of wood wool. You will have some fun getting the drill to bor through this wood wool, but it can be done. Now get some ½ in. tubing and cut it into lengths, s that it will snugly fit into the holes and be flush on both inside and outside. Get some perforate zinc (such as is used for meat safes), and roll i into tubes about 8 in. long and of a size sufficien to enable them to be pushed through the meta tubes fitted in your incubator. Push your pyjama cords into these perforated tubes, using a core o good white blotting paper inside the cord i necessary. Let the outer ends of the cords hang down sufficiently to drop into the jam jars, whic can now be filled with clean water. The cord wil suck the water slowly up by capillary attraction, an this moisture will be led right into the interior o the incubator by the wicks inside their tubes. Th temperature above the diaphragms is fairly high and the moisture will steam through the holes o the perforated zinc and mingle with the hot air i its downward passage towards the eggs.

A certain amount of regulation of the moistur can be obtained by withdrawing the zinc tube more or less from the interior of the incubator. If you want extra moisture at hatching time, yo can temporarily withdraw the tubes, dip them int warm water and re-insert them.

SCOTTISH LAYING TEST.

CUP AND MEDAL WINNERS.

Meeting of Scottish National Poultry Council.

A conference, under the auspices of the Scottish Nationa Poultry Council was held in the University Agricultural Lectur Hal on Saturday, when the cups, medals, and certificates gaine at the first Scottish laying test were presented to the winner by Mr. James Wood of the Board of Agriculture for Scotlan Mr. Wood spoke of the work being done at Seafield, Roslin, an the results obtained at the laying test. While in many case notably among the cup and medal winners, the grade of eg was high, there were, in the opinion of those dealing with th test, too large a proportion of second grade eggs. It was hope that the information gained by poultry breeders through th test reports would stimulate efforts to eliminate the second grad

(Continued at Foot of Column Next Page).

The Poultry Housing Factor and Winter Egg Production.

By **PROF. WILLARD C. THOMPSON,**
Director of the National Institute of Poultry Husbandry,
Newport, Salop, England.

Continued from Page 413.

I observe that there seems to be a more or less general tendency for commercial poultry-keepers to keep the average well-bred laying hen until the end of her second laying season, and then replace her with a new pullet. This knowledge of relationships between winter production and yearly totals helps us to make the dividing line between those to be saved further and those to be sold more clean-cut and accurate, and avoids much of the element of guess work which is otherwise too often involved. I have found it most useful, and I suggest it to your consideration I think it will at least offer a convincing argument as to the real and vital importance of securing winter egg production, and then using it as a basis for further operations. It means trapnesting on a larger scale, but for a shortened period and at a time when it often can be done economically. If the increased knowledge secured or the most satisfactory basis for selection and culling is gained, the use of that winter-time trapnesting is warranted.

I need only mention in passing that the essential reason for finding out how to secure winter egg production lies in the usually greatly increased prices paid for eggs at such time. It is the real argument for attempting to secure winter egg production.

LAYING HENS ARE HEALTHY HENS, AND MUST BE.

Winter -time egg production is accomplished in measure as we are able to overcome the natural tendencies of the hens and their natural habit to await prolific egg production until the coming of the spring. We have to constantly work against Nature, and try to surround our laying fowls with an environment which will encourage and stimulate them to egg production in spite of unfavourable weather conditions. Proper feeding, including well-balanced rations and such methods of feeding as will stimulate increased consumption of egg forming as well as body maintaining foods, must always be considered as factors of prime and paramount importance in inducing winter egg production, but that subject lies without the province of my part of your programme to-day, and as it lies in Mr. Newman's hands, it is in expert hands, and I pass it by with every confidence that his discussion of it will guide you most efficiently. But, perhaps, unfortunately, feeding cannot alone bear the burden of influencing the average flock of hens to lay during the bitterness of winter cold.

The first essential to egg production is health. Health in laying hens, it seems to me, must be considered as a condition of the hen's body which renders it capable of normal and natural activity in its various parts and organs, capable of response to increased allotments of foodstuffs—that is capable of standing up under the really huge food consumption we demand of the modern hen, and capable of remaining in vigorous activity, feeling fit and like the working unit which she is, in fact. Without health no flock can long remain in laying condition. Egg production is the response of healthy egg-producing bodies to stimulating foods or environmental conditions which induce activity of the digestive and egg-producing systems. The flock is directly and immediately affected by its surroundings. This is especially true during winter days. In my own personal opinion I cannot but feel that, especially in such sections of the world as have more or less cold and long winters, the best laying flocks will always be those which are provided with a suitable house and then kept rather closely confined to it during that winter period. For nearly fifteen years I have run every flock of laying hens which has come under my influence, except experimental lots, of course, closely confined to the winter laying houses, and, I think, with best results. Essentially there are three good reasons for this—perhaps you will call it intensive—system of winter laying flock management. Firstly, if we would get winter egg production, our layers must be constantly prodded to food consumption. They will not eat enough if allowed out of their house. I found a striking example of this fact only last week, as I went through one of our long experimental laying houses at the Institute plant down at the Harper-Adams' College. We have five series of pens in that house,

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egg, and so place this country in the first rank of poultry breeding.

The following is a list of the cup and medal winners:—

Cup presented by the Scientific Poultry Breeders' Association for the pen making the best score during the first three periods of the test not more than 60 second grade eggs to count.—James Prentice. Loancroft Poultry Farm, Uddingston: White Leghorn; score value 348.

Cup, presented by the National Utility Poultry Society for the pen of pullets laying the largest number of first grade eggs during the test.—Mrs. M. Logan, Kirkland, West Kilbride, Ayrshire: Rhode Island Red; number of first grade eggs, 1211

Cup, presented by the Khaki-Campbell Duck Club, for the pen of Khaki-Campbell ducks making the highest score during the test.—Captain R. A. Long, Stondon Manor, Shefford, Beds.; score value, 1055.

Medals Presented by Scottish National Poultry Council.

White Leghorn Section.—Gold Medal: Mr. D. Baxter, Lanark. Eggs, 1382; score, 1316. Silver Medal: Mr. J. Prentice, Uddingston. Eggs, 1209: score, 1122 (one bird died in June). Bronze Medal: Mr. J W. Dobbie, Rothesay. Eggs, 1326; score, 1102.

White Wyandotte Section.—Gold Medal: Mr. R. A. Oliver, Fife. Eggs 1239; score, 1166.

Rhode Island Red Section.—Gold Medal: Mrs. M. Logan, West Kilbride, Ayrshire. Eggs, 1271; score, 1269. Silver Medal: Mr. H. P F. Roche, Stevenston, Ayrshire Eggs, 1140; score, 1101.

Non-Sitters (other than White Leghorn) Section.—Gold Medal (B.L.), Mr R. Scott Miller, Uddingston. Eggs, 1215; score, 1121. Silver Medal B.L.), Jackson and Johnstone, Stonehouse, Lanarkshire Eggs, 1103; score, 1101. Bronze Medal (B.L.), Mr. A Watson, West Linton. Eggs, 1055; score, 976.

Sitters (other than Rhode Island Red and White Wyandotte) Section.—Gold Medal (B.R.): Mr. J. Adams, Cleland, Lanarkshire. Eggs, 1063; score, 1062. Silver Medal (Barn.): Mrs. I Craig, Dunlop, Ayrshire. Eggs, 1051; score, 1051.

Duck Section.—Gold Medal (W.R.): Mr. H. S. Goldsmark, Ashford, Kent. Eggs, 1270; score, 1220. Silver Medal (K.-C.): Capt. R. A. Long, Shefford, Beds. Eggs, 1062; score, 1055. Bronze Medal (W R.): R. A. and A. M. Johnson, Stroud. Eggs, 1020; score, 1019.

two pens or flocks in each series. We are running an experiment in which each set of two pens is receiving a different type of feeding mixture or ration. In each pair one flock is kept closely confined for the winter period, and the other is allowed access to the yards, if they wish. The other afternoon I very quietly stole into that house. The exit door of Pen 1 had been opened. It was a little after two in the afternoon. Out of forty Leghorn pullets in that pen, all in laying condition, only two were at the mash hopper, four more were in the house but idling about on the floor, and the whole of the remainder were out of doors, eating nothing, just enjoying the sunshine. Pen 2 was a different matter. There were 14 pullets busy eating at the hopper, and several were in the nests at that time. The feed records of the two pens already indicate a decidedly increased mash consumption in the closely confined pen. I have seen this work out this way so many times that I am pretty firmly convinced of its worth as a practise. Secondly, layers closely confined can be more closely watched and more intimately managed, according to their real needs. This does undoubtedly end in increased response to feeding egg-producing rations. Winter layers are very much creatures of habit, and we can so much more easily accomplish this by keeping those layers under close confinement. We can regulate their winter lives to a nicety, so to speak. Thirdly, it is my conviction that the fowls can be kept in better condition of health if kept under guarded, even though more crowded, quarters. The modern winter laying house is a sanitary environment, or we want to make it so. It is comfortable, and hens that are not comfortable during winter days will not lay. It may be catering to the hen more than we ever thought we would need to, but it is essential that laying hens should be warm enough, dry enough, and comfortable enough to induce them to act as they would during spring days when outside natural conditions create within them that same response. Our winter laying house must overcome the outside discouraging conditions of winter time, and provide an environment that will stimulate the fowls to spring-time activity, at least in part.

I have a feeling that the most efficient, and in the end the most economical poultry house, speaking particularly of laying houses, is that one which is planned and built to take care of the needs of the laying stock during the most extreme periods of the winter, and for that matter of the summer, season, but which can be quickly and easily and economically modified during milder weather or for average days. Too many poultry houses are planned and built to provide a suitable environment for average conditions. This won't do, for it is during extremes that trouble comes and the fowls need surest protection.

I should, then, like to suggest that every laying house should be planned on this basis of providing against possible and probable extremes. In this case there are a few fundamental characterestics or features which should, in my opinion, be built into the average, commercial, practical laying house. And if the laying house is successful and economical for the specialised poultrykeeper, it surely is practical for the farmer-poultryman who would find the way of making real money out of his hen flock. The same general principles apply everywhere and anywhere in the building of an efficient poultry laying house.

(To be Continued).

THE YORKSHIRE FEDERATION LAYING TEST, LTD.

2nd INTERNATIONAL EGG LAYING TEST, 1925-26,

Now being conducted at the **Test Ground, Otley, Yorks.**

Report for the First Month—20th October to 16th November, 1925.

The birds for the second year of the test arrived at Otley on the 13th and 14th of October, and were inspected by the Management Committee.

Some birds were somewhat immature, and probably will not come into lay for some time. On the other hand, many birds had laid before being sent to the test. Of these, a considerable proportion has fallen into partial moult; whilst a few of them are now passing through full moult

The weather during the period under review has been very wet in the first part, and severe frosts have prevailed during the latter part. In spite of the adverse weather, the egg yield has been satisfactory. The weekly production of eggs has been as follows:—During the week prior to the commencement of the test, 960 eggs; the first week of the test, 1120 eggs; the second week, 1322 eggs; the third week, 1426 eggs; and the fourth week, 1488 eggs. It will thus be seen that there has been a steady increase in the yield. Birds are coming into lay daily.

Pullet No. 530 has been broody, and has been confined to the broody coop for four days. A few birds have suffered from colds, and five deaths have occurred. Otherwise, the health of the birds is very satisfactory.

For the "Daily Dispatch" Gold Challenge Cup for the pen in Classes A. or B. which produces the highest average per bird.—Sutton and Sons, Preston (W.W.), 5s 6½d.; R. Rodwell, Nelson (B.L.), 5s. 4.1d.; E. Watson, Earby (W.W.), 4s. 9.9d.

The 'Miss Delaney" Silver Challenge Cup for the best bird in the test, and the "Daily Dispatch" prizes of 12 guineas, 7 guineas and 5 guineas for the three best birds in the test.—Dr. J. E Helm, Waterfoot, Lancs. (W.W.), 24 eggs; J. W. Hodge, Holmfirth (W.W.), 25; The Marchioness of Graham, Brodrick (R.I.R.), 22.

The "Mrs. Clay" Silver Challenge Cup for Class A., Section 1, White Wyandottes.—Dr J. E. Helm, Waterfoot, Lancs., 159; A. Snowdon, Pool, 143; Mrs. Clay, M.B.E., Long Preston, 131.

The "Tom Barron" Silver Challenge Cup for Class A., Section 2, White Leghorns.—R. Rodwell, Nelson, 192; Mrs. Clay, M.B.E., Long Preston, 95; Lord Dewar, East Grinstead, 56.

The "Sir Donald Horsfall" Silver Challenge Cup for Class A., Section 3, A.O.V. Light, or Heavy.—W. M. Golden, Leire, Rugby, 82; S. Street-Porter, Ely, Cambs., 45; Tom Barron, Catforth, 42.

The "Frank Snowden" Silver Challenge Cup for Class B., Section 4, White Leghorns.—G. W. Sutcliffe, Hebden Bridge, 101; R. H. Fryers, Bradley, Keighley, 96; Lieut.-Col. Eden, Cranswick, 88.

The "Allen Bros." Silver Challenge Cup for Class B., Section 5, Black Leghorns.—R. Rodwell, Nelson, 114; Colonel Spence, D.S.O., Kirklevington, 35; Davey and Sons, Sutton, 33.

The "Jack Wrennall" Silver Challenge Cup for Class B., Section 6, White Wyandottes.—Sutton and Sons, Preston, 127; E. Watson, Earby, 106; G. H. Rayner, Grantham, 80.

The "Fred Simpson" Silver Challenge Cup for Class B., Section 7, Rhode Island Reds.—R. Rodwell, Nelson, 105; D. E. Kitchin, Easton, 80; Miss Maddison, Dane Hill, 63.

The "Will Hammett' Silver Challenge Cup for Class B., Section 8, A.O.V. Light or Heavy.—A. White, Malpas, 104; S. Wigglesworth, Farsley, 92; J. W. Towler, Farsley, 63.

The "Yorkshire Federation" Silver Challenge Cup for Class C., Section 9, Any Variety, Light.—Mrs. Hawkesworth, Pool, 21; C. Sturdy, Harewood, 18; Wm. Wharton, Keighley, 18

The "Percy Wainwright" Silver Challenge Cup for Class C., Section 10. Any Variety, Heavy.—Miss Mawson, Adel, Leeds, 22; Mrs. Hawkesworth, Pool, 22; F. H. Wilson, New Earswick, 19.

The "G. R. Poole" Silver Challenge Cup for the best pen, any colour Orpingtons, Australorps, or Rocks. S. Wigglesworth, Farsley (Bf. Rks.), 92; J. W. Towler, Farsley (Bf Rks.), 63.

The positions of each pen of birds, and of each single bird, are being determined by the value of the trap-nested eggs produced by them as is laid down in paragraph 2 of the Rules and Conditions of the Test, which reads as follows:—"All birds will be trap-nested, and the total number and weight of eggs will be recorded. One egg will be credited for each 2ozs. so produced. The points thus obtained will be valued at the average Keighley Market price for each four-week period. No untrapped egg will score.

Some Fruit-Growing Notes

to help Poultry-Keepers.

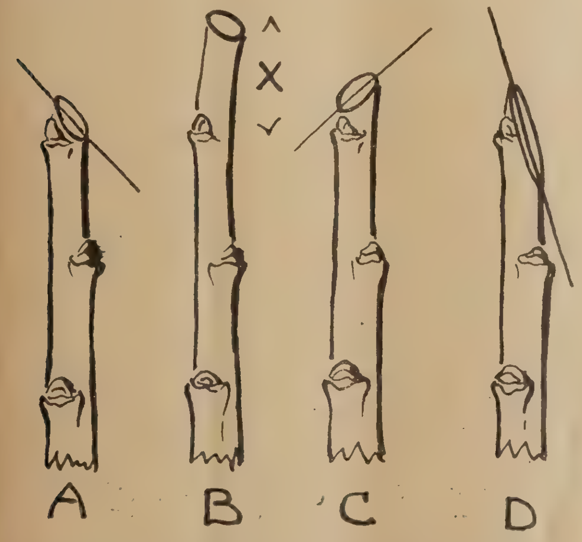
By F. W. WHEELER, F.R.H.S.

PRUNING—(Continued).

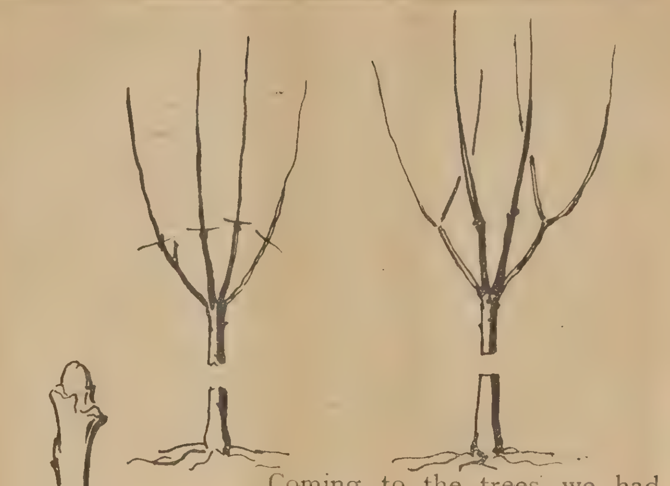
In my last article (page 396) I summarised some "points to be considered and studied" when pruning, and some "objects" to be aimed at in order to obtain good fruit. I likewise had to add that the "how, when, and why" in detail must follow.

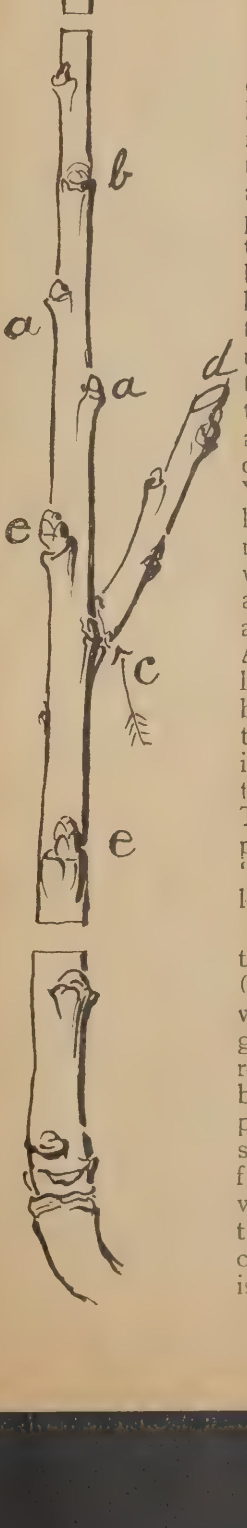
Many of the points have already been more fully dealt with in my little book published by the S.P.B.A., but I want to give yet further details for guidance, because I know from experience how simple a thing pruning may seem when you read an article on "How to Prune," and when you commence this operation on your trees the growths appear to be so different in many, many ways that one becomes quite puzzled as to what to do for the best.

Perhaps if I give a few sketches they may more clearly guide the beginner, so I propose to make a series of drawing of actual growths from my own orchards. Firstly, I want to show the correct method of cutting, and I always recommend a knife with a fixed blade in preference to secateurs as more certain of giving a clean cut and exactly where required. I have seen so many persons badly cut their hands when pruning, because they will not keep the left hand BELOW the knife that I think it wise to mention it. You will also find that it steadies the branch, or twig, when held below where cutting, and so help in having a cleaner cut, yet many cut themselves before they get into the habit of keeping the knife above the left hand.



A. shows correct slope and how near to bud.
B. Wood x that will die if left above bud.
C. Cut in wrong direction respecting the bud.
D. Cut too sloping and too close to bud.





Coming to the trees we had better treat first of all with the young ones; and their first need of a well-shaped and balanced head. As one always recommends the planting of two or three year old trees, they naturally will only have three, four, or perhaps five main branches, and these we must increase in number until eventually we have our head (with an open centre) something like the ribs of an inverted umbrella. Therefore to increase these few main branches we cut to where there are two side eyes, aa on Sketch 3, so as to give a double extension, like the letter Y; but as the spacing between leading shoots of young trees are rarely of an equal distance apart we frequently have to cut only to an outside eye, as at b, to obtain a single extension (or "leader"). All shoots growing inwards and likely to crowd the centre should be cut entirely away at its junction with the main stem (c), but if it is a side shoot not crowding the head it can be cut as at (d). This almost brings me to the pruning of "laterals" and "spurring," but that I must leave over for the next article.

Let me just draw your attention to the fruit eyes on the sketch (e), because we must prune to wood eyes (a) for new wood growths. I must add a further remark about these fruit buds, because in early days I was often puzzled what to do when I found some young trees had almost all fruit buds and I could not find wood eyes where required to obtain my new growths. (The check given to trees by replanting is often the cause of turning the wood eyes to fruit buds.) The best I can recommend is to cut back more than the average reduction of two-thirds of the new growths. When even this will not meet the case, you must cut to a fruit bud, but if you watch later on, when the fruit bud is in flower, and carefully remove the petals, you will trace a young growth that will develop into a wood shoot, because you have prevented the blossom from turning to fruit. Do this to several of the fruit buds, as plenty of new wood (and little fruit) is essential to young trees to establish them for good crops in the future.

Referring again to the first sketch, I propose next week to say something more about these long, sloping cuts, and of some experiments that I have been carrying out.

Correspondence.

Re STRAW HOUSES.

To the Editor of "Eggs."

Dear Sir,—For the benefit of readers who are just now very interested in straw houses, my experience and practical tests may prove interesting.

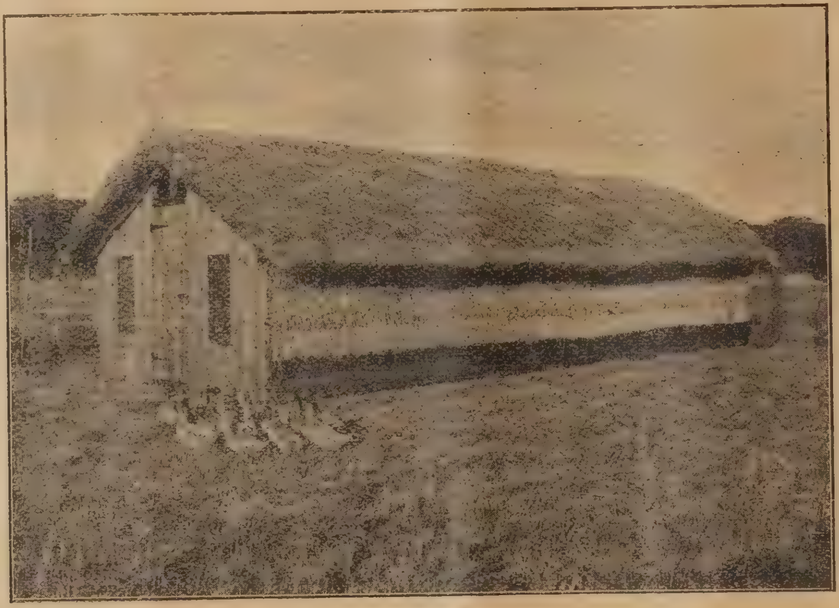
Nearly four years ago I built on the Cotswold Hills these houses for the purpose of trap-nesting 200 ducks, and I must say they have given great satisfaction, as housing costs of all birds to-day needs serious consideration.

My greatest difficulty has been keeping rats out of the roof. These pests have had to be regularly followed up with ferrets, as, if neglected, a leaky roof soon results. The rats will climb the bottom boards, as described in sketch, at the corners, and once in the thatch walls the rest is easy. I have recently overcome the trouble by covering the angles with thin sheet galvanised iron, this prevents them climbing up.

These houses have extra light in the gable ends which are constructed of timber, with two large windows in each end, with a doorway in the centre.

When Mr. Elford, of Ottawa, Canada, was visiting this country he took photographs, drawing and details of these buildings for experimental purposes (I believe for poultry) in Canada.

Critics are always abounding in this industry but before condemning I would suggest, "Wait and see." Mr. L. G. Price has placed a proposition for cheap housing of poultry for the farmer. I



DEVON COUNTY EGG-LAYING TRIALS. 1925-1926.

Report for the First Period (October 13th to November 11th, 1925).

The trials are established at Kerswell Barton, near Exeter, and consist of 40 pens of five pure bred pullets per pen, divided into two sections, viz.: Light Breeds and Heavy Breeds.

The pens of birds are housed separately in houses of the double type, each half giving four square feet of floor space per bird. Grass runs, measuring 12 yards by 10 yards are provided for each pen of birds.

The site is 100 feet above sea level, exposed to south and west. The houses face south-east; the soil being a light sandy loam.

Scoring (first period of four weeks).—Grade: Special, 2ozs. and over 11 points. First, 1⅞ozs and over, but under 2ozs., 10 points; second, 1⅝ozs. and over, but under 1⅞ozs., 8 points.

The weight of scoring eggs and the number of points allocated varies with each monthly period.

For the most part the birds entered were forward in condition, the first scoring day yielding 75 eggs. This has resulted in a number of birds going into a partial or full moult, but is mainly confined to Light Breeds. The general health of the birds throughout the month was excellent.

SUMMARY OF LEADING PENS.

Figures are Eggs and Points to date respectively.

Light Breed Section.—The Hon. Mrs. Adams (W.L.), 90, 734; H. C. Wood (W.L.), 77, 709; G. Keith Simmons (W.L.), 85, 709; Mr. and Mrs. R. Patterson (W.L.), 68, 642; Miss Hey and Mrs. Robertson (W.L.), 61, 573; W. Runciman (B.L.), 63, 556.

Heavy Breed Section.—A. and J. Rew (W.W.), 112, 1043; G. V. Thompson (W.W.), 108, 1010; H. C. Wood (W.W.), 105, 989; Capt. H. M. Jelley (W.W.), 91, 970; C. H. Trude (W.W.), 105, 154; Brig.-General M. E. Richardson (W.W.), 97, 940.

may perhaps be improved upon, as he suggests, but, in the meantime, let us be constructive in our ideas and try to improve on it.

It enlarging this farm I would certainly test one of these houses on fowls, but think it would be a great boon for brooding chicken on the small unit system with hovers. I enclose a block for reproduction, which will fully describe my thatched house, showing lighting, etc.

Trusting the above may be of service to those who are contemplating the erection of thatched houses.

I am, yours faithfully,
B. C. BREWER.

STRAW HOUSES

To the Editor of "Eggs."

Sir,—May I be permitted a small space in your valuable paper to reply to Mr. L. G. Price's remarks in the issue of December 2nd.

In the first place, it was the article which appeared on page 259 of October 21st that prompted me to make the comments in question. I pointed out that smaller mesh netting was required, and the cost would be increased thereby.

If wire netting has to be sunk some 2 ft. in the ground to keep out vermin, will a 6 in. board do so?

I quite understand that the ears of corn should be covered by the next layer, theoretically, but does no always do so in practice.

With the general farmer the house no doubt would be an economical one, but Mr. Price will note that my letter was written more in the interests of the smaller poultry-keeper, who would have to purchase all materials, and who, perhaps, like myself, is not an expert in thatching.

In conclusion, as I am writing to Mr. Price in the course of a week, the information asked for will be sent him and probably an interview arranged.

Thanking you, and wishing your paper every every success.

I am, yours faithfully,
T. E. RICHINGS.

LIGHT v. HEAVY BREEDS.

To the Editor of "Eggs."

Dear Sir,—Re the discussion on the Light breeds v. the Dual-purpose breeds, I should like to mention our experiences with White Leghorns and Rhode Island Reds.

Our February, 1925, hatched R.I.R.s were first trapped on July 31st, and up to this date (Dec. 12th) their individual records all follow close on the highest score, 110 eggs. The eggs are, with occasional exceptions, 1st grade, and the birds are laying 66.6 per cent. daily. The Leghorns hatched at the same time have been in a partial moult, while the later birds are laying eggs of a smaller size than the R.I.R.s; also not one can show a record of much over 50. During November the Leghorns laid, for the most part, under 20 eggs each, compared with the R.I.R.'s 20-29 eggs each.

With regard to the moult, the Leghorn hens have not laid an egg for some weeks, while the R.I.R.s are still laying about 16 per cent. daily. I should like to say, least you should think that we have got hold of a poor strain, that from the 7th October, 1924, to the 31st May, 1925 (excluding the 59 days from November 27th to January 25th, when trapping was interrupted by a gale carrying away the laying house), one 1924 W.L. pullet laid 110 eggs of excellent size compared with 102 laid by a R.I.R. pullet; but while the R.I.R.s were bunched below this score the second best W.L. laid 79 eggs.

I presume there is no question about the difficulty of disposing of surplus Leghorn cockerels.

Yours truly,
R. G. NETTELL, M.S.P.B.A.

LIGHT v. HEAVIES.

To the Editor of "Eggs."

Dear Mr. Newman,—In a recent issue of "Eggs" Mr. Heaton writes that, because he has a flock average of five eggs per bird with his Leghorns in excess of a flock average of R.I.R., the property of Mr. Appleton, he is satisfied that Leghorns are the birds for a commercial egg farmer.

Presumably for each pullet raised to laying age there is one cockerel to be sold; assuming that a pullet replaces a hen, there is one hen to be sold.

Let us see how this works out on paper:—

LEGHORNS.

5 additional eggs sold at an average price of 2d. each	£0	0	10
1 cockerel sold at an average price of 1s. each ...	0	1	0
1 hen sold at an average price of 1s. 6d.	0	1	6
	£0	3	4

R.I.R.

1 cockerel sold at an average price of 6s.	£0	6	0
1 hen sold at an average price of 3s.6d.	0	3	6
	£0	9	6

This leaves a balance of 6/2 gross in favour of the R.I.R., which I suggest leaves an ample margin for extra labour entailed for broodiness, and extra consumption of food, and a substantial increase of profit over the Leghorn.

I maintain you can have a far greater difference in the flock average of Leghorns and R.I.R., as much as 30, and still show a greater profit from the R.I.R. than from an equal number of Leghorns.

In last week's issue of "Eggs" Mr. Hector Morrison states his reasons for scrapping Wyandottes in favour of Leghorns. It is with some hesitation that I venture to criticise one who has the experience and reputation of Mr. Morrison.

In the first place, I think it is hardly fair to compare the two breeds he mentions in coming to a decision as to which is the better bird, commercially, the light or heavy. The Wyandotte does not sell as a first-class table bird, and I understand it is the experience of most breeders that, in these days, it produces a far greater proportion of second grade eggs than some of the other better-known breeds.

Mr. Morrison says that a house holding 500 Leghorns will only hold 400 Wyandottes. He provides 4 to 4½ sq. ft. per bird for his Leghorns. This is ample room for heavies, and it can only be a question of perch accommodation, which surely could be arranged to admit an equal number of heavies as Leghorns.

The chief point in this letter, to my mind, is the increased consumption of food. To what does this amount? With a flock of 400 heavies this would amount to £54 3s. 4d. more than for an equal number of Leghorns in twelve months, working on the basis that a Leghorn consumes 2½d. in food in one week.

Mr. Morrison found very little difference in actual egg production between his two breeds. In the following figures I will allow a difference of 10 eggs per bird in favour of the Leghorn.

400 Leghorns average 170 eggs at 2d. each	£566	13	4
400 ditto. cockerels sold at an average of 1s. each	20	0	0
400 ditto. hens sold at an average of 1s. 6d. ...	30	0	0
	£616	13	4
400 R.I.R. average 160 eggs at 2d. each	£533	6	8
400 ditto. cockerels sold at an average of 6s. each ...	120	0	0
400 ditto. hens sold at an average of 3s. 6d. each	70	0	0
	723	6	8
Less extra food consumed	54	3	4
	£669	3	4

This leaves a balance of £52 10s., or 2/7½ per bird, in favour of the heavy flock.

Yours faithfully,

H. C. FEW.

TESTIMONIALS—S.P.B.A. FOODS.

Cottonera Poultry Farm, William, Herts.

Dear Sir,—I am very delighted with the mash, the birds eat it with relish. Please find enclosed cheque for last lot, and will you please order for me a further ten cwt. for immediate despatch, as I have only sufficient for a day or two, and should be very sorry to run out after so good a beginning.

Yours faithfully,

(Signed) WALTER C. MARDELL.

School House, Gedney Drove End, Wisbech.

Dear Sir,—I would like to say how highly I think of your mash. I formerly used a proprietary mash with good results, but the results from your mash have exceeded all expectations. Even my seven months old pullets are laying heavily.

Yours faithfully,

(Signed) JAMES L. BULLIN.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answers all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

A. F. M. (Bucks) sends a sample of maize meal at 13s. cwt. This is a very moderate sample, and I consider the price rather high. A good sample of broad bran at 10s. 6d. per cwt. is also enclosed. Middlings at 10s. 6d. are a good average sample. The analysis of the fish meal is given as two to five per cent. oil, but I believe the oil content is higher than this. In other respects it is satisfactory.

J. B. K. (Northwich) asks what is the cause of the neck moult, and if there is any prevention or treatment advisable. The particular birds he has in mind are ten March, 1925, hatched White Leghorn pullets in a flock of 75 of the same age. His second question is, "Is there any advantage in hatching early White Leghorns for laying purposes—i.e., January and February?" If they are hatched in the last week of January my correspondent asks, "What would be the moulting and laying periods, by assuming correct feeding? Would they moult and lay again?" As far as our present knowledge goes, the cause of the neck moult is due to the fact that the bird becomes in under condition through her inability to consume sufficient food for both development and production. It is probable that these March hatched pullets began laying at an early age, and this would explain why they fell into a moult. The only possible means of preventing it is by heavy feeding, and this is not always effective. However, I think we have enough data to enable us to say definitely that these pullets would not fall into a moult if under artificial light. As to the advantage in hatching in January and February White Leghorns. Yes, I consider there is decided advantage in hatching in January and early February, at least 25 per cent. of the total stock. The cockerels will show a profit for table purposes when sold in this month, which the later hatched birds do not. Much depends upon the strain and rearing conditions, but a January hatched Leghorn should be laying at the middle of June. Again, as to the periods of moulting. This also depends on the strain and rearing conditions. If well managed they will continue to lay well into the end of October, then the partial moult takes place in a certain percentage of the pullets and they will come on to lay soon after Christmas—in some cases earlier. My correspondent must understand that we can give no definite date as to when the birds would go into a moult or even whether they would moult or not. In some cases they would not, in others the date of the moult depends very much upon the individual, upon the management, and upon generally the environmental conditions. There is no fee for a reply by post to members of the S.P.B.A.

B. M. W. (Brislington) has two Wyandotte pullets—one of which started to lay on the 1st October and laid 15 eggs, and then went broody on the 24th. She was then put in a broody coop for three days and then taken out, and has not laid since. The other started to lay on 30th October and laid 10 eggs, and then started going on the nest and not laying. My correspondent thought this might be because she was too fat, and when he weighed her she was just over 4¼ lbs. He asks what line he should take with them. In reply to his letter I wonder whether his treatment of the broody pullet was too drastic, and as a consequence she has got out of condition? With regard to the second bird going to the nest and not laying. It is possible that she is absorbing her eggs. I cannot gauge by her weight whether she is too fat or not. The best way to ascertain this would be to feel the abdomen, and if this is tight and hard, the possibility is that she is too fat, and if she is absorbing her eggs I am afraid there is nothing to be done. If she is too fat she should be given more exercise and less mash, but it is a question of condition with the first pullet. My correspondent also asks what is meant by the winter record. The S.P.B.A. definition of a winter record is a pullet which lays 40 or more eggs in any 90 consecutive days between the 15th October and the 31st January.

"Bad Results" (Canterbury) sends me a sample of mash, said to be made up to our formula. Results are poor. His birds are Light Sussex and White Leghorns hatched in March. I have carefully examined the mash, and, although I find that the quality of the ingredients is good, there appears to be a deficiency of animal protein. Indeed, it is very difficult to discover any. I would advise my correspondent to add ten per cent. to this mash, as already mixed, if he has any quantity in stock.

S. R. (Kenilworth) writes in reference to my remarks in a recent article, "that a medium-size bird is best," and wishes to know whether this would apply where the records are known—that is to say, would I discard a large hen that had put up a good record? Most certainly, no. My correspondent is applying my remarks to the individual, and what I meant was that we should not breed for size, which is uneconomic. The medium-size bird is best in every respect. I was writing of a principle in breeding. If we breed **for** size, we are bound to lose in egg production, but, on the other hand, if we breed from precocious birds we lose size, which in itself is an economic factor; therefore it is always best to maintain the medium.

R. M. (Wilts) has a White Leghorn cockerel which has a rattle when he breathes, and a January hatched bird has been like this since the summer. "R.M." wishes to know whether the cockerel will be all right for the breeding pen. I should suspect bronchial trouble, and possibly something wrong with the lungs. As birds in the breeding pen should be in perfect health, I should not be inclined to use him. Perhaps a little cod liver oil in the mash would help matters, say two teaspoonfuls to every pound of mash. More than this, and keeping the bird in a perfectly ventilated house, he cannot do.

J. B. (Cirencester) is getting very poor results from a pen of 60 White Leghorn pullets, eggs are few, and many of these are shell-less. He gives details of his feeding, which is satisfactory, and says the birds appear in perfect health, but are very nervous. He adds they are in good condition. He has handled them and found they are not over-fat. The house is of the lean-to type, 20 ft. x 14 ft. The pullets were bought as day-olds from a well-known breeder. I fancy that "J.B." is himself responsible for the trouble. The shell-less eggs are probably due to the nervous condition of the birds, and this, too, is responsible for the poor production. When birds are in a highly nervous condition they do not assimilate their food properly. Many people do not realise this. The only advice I can give "J.B." is to be as quiet as possible with the pullets, and he will get better results.

C. A. R. (E. Lancs) is keeping hens intensively with results which are not wholly satisfactory, and he asks advice re feeding. He gives wet mash, 2½ ozs. per bird weighed dry, first feed, a scratch feed of grain at mid-day, and 2 ozs. of grain per head as last feed. The mash consists of: Thirds 4 parts, biscuit dust 1½, ground oats 1, and meat meal ¾ part. Green food is scarce, and he has been advised to give the birds Epsom salts once a week during the winter months. If "C. A. R." slightly alters his feeding I think he will get better results. He should add one part alfalfa meal to the mash, and replace the meat meal with fish meal. Further, it would be better to give the mash at mid-day, such a heavy feed as first feed makes the birds inactive. They should also be given as much grain as they will consume as the last feed.

Inc. (Weston) sends eight eggs from his incubator, a Glevum 150 egg size. Only 50 per cent. of the eggs hatched, and he wants to know where the fault lies. The indications are that many of the eggs were stale, and in the others the germ died at an early stage. This was not due to conditions in the incubator, unless he was running at too low a temperature for the first week. I am inclined, however, to think that the male bird is immature. He should consider both these points. (2) With reference to birds not eating mash, this may be due to some ingredient which they dislike. If "Inc." will send samples I may be able to advise him.

Blackboy (Newtown) has eight Wyandotte pullets, hatched late in March, which began to lay in September, and averaged 44 eggs each to the middle of the present month. Unfortunately eggs are very small, and he wants to know if he can improve size by feeding, and also as to whether he can breed to the same end. Feeding has very little to do with size of egg. If a hen is in good condition she will lay the size of egg which she has inherited; an underfed bird cannot do this, and underfeeding during the growing period frequently accounts for the small egg laid by pullets. With regard to breeding, my correspondent should get a male from a dam laying a 2¼ oz. egg, and he should also see that the sire's dam laid an equally large egg. Then it will be a question of careful selection and mating for two or three years before he get a large-egg strain.

N. D. D. (Stafford) is disappointed in some Brown Leghorn-Light Sussex pullets which he bought as day-olds, egg production has been bad and size nothing to write home about. The cross has not produced such good layers as his pure Leghorns, and some of the pullets have been broody after laying a few eggs. He writes to me for an explanation. So many people are under the impression that a cross will give better results than a pure breed. The explanation probably is, the Brown Leghorn male was not bred from an individually trapped dam, or was a cull from an exhibition flock. If these first crosses, whether sex-linked or otherwise, are to produce really good layers, the trapnested males must be from stock, and the hens should also have good records, or at least be selected. (2) Samples sent are of excellent quality, but biscuit meal at 30s. per cwt. is not an economic proposition, neither is this particular sample worth the money.

L. V. (Longhurst) has a White Leghorn cockerel from a dam with a record of 258 eggs. Unfortunately the bird has "Wry tail," and "L.V." wishes to know if this matters. Certainly it matters. This deformity is highly inheritable, and the bird should be scrapped. In reply to his second query, re incubation. If he wishes to collect sufficient eggs for his 150-egg machine and is afraid that it will take more than ten days to do so, his best plan will be to wrap them in two or three thicknesses of newspaper, and store them in a temperature as nearly as possible 50 degs. Fahr. I am afraid I cannot answer his question as to why it is said that eggs should not be kept longer than ten days for incubation. No one knows why this time limit has been placed. As a matter of fact, the fresher an egg is when incubated the more likely is it to hatch, and the conditions under which is it stored previous to incubation are more likely to determine its hatchability than the length of time it has been laid.

C. P. (Barnsley). The best mash you could make with the ingredients you have would be: Clover meal one part, malt culms one, middlings 4 parts, potatoes, 2 fish meal one part. (2) Certainly in such an exposed position I would dub the Leghorn cockerels. It is not so much a question of improving fertility as preventing infertility. The operation is a simple one, and not cruel. (3) If I had a bad outbreak of coccidiosis, and feared another, I would rear all my chicks intensively for the first six weeks of their lives at least. (4) Unabsorbed yolk is not a symptom of any particular disease, it is a result of a check to the digestive system, and may arise from chill, bad feeding, or from other causes. It is commonly found in chicks which die from B.W.D., but it is not the cause, neither is it a symptom of the disease. (5) Buff Rock males mated to White Wyandotte hens would give buff pullets, and white or silver males, the sexes would be distinguishable at hatching. I should expect the pullets of such a cross to be as broody as their parents. They should prove good winter layers. I would prefer to breed the Buff pure or the Wyandotte pure, I can see nothing to be gained by such a cross as this. (6) You are not very clear on this point, but as such a large percentage of the eggs failed to hatched, and the eggs were so full, I am inclined to think that the trouble is due to excess of moisture in a badly ventilated machine.

POST-MORTEMS.

H. M. D. The post-mortem examination of the W.L. pullet showed that she was affected with diphtheritic roup, a deposit of the false membranes having blocked the epiglottis and caused suffocation. Isolation of the affected flock, frequent and thorough disinfection of the house and equipment, and burning of the droppings and litter are essential to control and to prevent spread. Care also is necessary in the avoidance of carrying contagion through the media of hands, boots or clothes, etc. To treat, make a stock solution of copper sulphate by dissolving four ounces in a quart of soft water, and add one ounce of this to every gallon of the drinking water, or a little more if other than earthenware drinking vessels are used. Inspect the birds daily, removing any yellow deposits (false membranes) found on the mucous membrane of the mouth or throat, and painting the underlying raw surface with a 5 per cent. solution of silver nitrate, or rub with a caustic stick. Two grains per head of powdered cinchona bark may with advantage be added to the mash, or administered as pills to birds whose appetites are poor.

C. L. A. The post-mortem examination of the pullet showed that she was affected by thrush, the causative agent being a fungus, termed oidium albicans. This fungus was found upon microscopical examination of the mouth lesions, which differed materially from those of diphtheritic roup in that the "membranes" were quite easily detachable from the underlying tissues, which were not inflamed or raw as in the case of roup. Lesions were also found in the gullet and crop, hence the rather emaciated condition of the body. I should advise you to examine the mouths of her immediate incontacts, as thrush may prove as serious as roup, as far as losses go, and to adopt the same precautions as regards disinfection and isolation as in the latter disease. The treatment is identical, viz., copper sulphate in the drinking water, 1 dram to the gallon, or an ounce of a stock solution made by dissolving four ounces in a quart of soft water; remove the fungus from the mouth, etc., and paint the underlying tissues with a copper sulphate solution 10 grains to the ounce of soft water.

M. C. C. The post-mortem examination of the fowl showed nothing abnormal until the brain was reached, and there a clot of blood was found, the condition of course being known as apoplexy. Just what caused this, there was nothing to show. except that she was very fat internally and in a plethoric condition, which predisposes to high blood pressure and weakness of the blood vessels. There is nothing contagious about it, so no anxiety need be felt on that score, but I always feel that it is a wise precaution to have a post-mortem made on birds in which the cause of death is not very obvious.

Scientific Poultry Breeders' Association.

Full particulars of membership will be sent by return on application to the Secretary, Mr. Tom Newman, The Beeches, Rudgwick, Sussex.

COUNCIL MEETING.

The Monthly Meeting of the Council was held a
the Memorial Hall, Farringdon Street, on Wednes
day, December 16th, the President (Mrs. Hunter
being in the chair.

Present : Miss Maddison, Messrs. J. G. Kitson
John Smart, E. Bostock Smith, P. Hedwort
Foulkes, A. H. Paine, R. Fletcher Hearnshaw
J. H. Dowden, A. E. Hamlin, the Treasurer an
Secretary.

Before the proceedings commenced the Presiden
referred in feeling terms to the loss the Society ha
sustained by the death of the late Mr. P. I
Johnson, and moved that a resolution expressin
the deep sympathy of the Council to Mrs. Johnson
be forwarded her. Mr. John Smart, speaking i
support, said that Mr. Johnson had been associate
with the S.P.B.A. since its formation, and durin
the most trying times he had always been mos
helpful. His colleagues had a very great regar
for him, and during his three years of Presidenc
the S.P.B.A. had made remarkable progress. Th
following was the resolution :—

"The Members of the Council of the Scientific Poult
Breeders' Association have received with deep regret the not
fication of the death of their valued colleague and past Presiden
Mr. P. L. Johnson, and would like to place on record the fulle
assurance of their sympathy and condolence with his widow a
the members of his family."

The Minutes of the previous meeting were the
read, confirmed, and signed.

A letter from Mr. Edward Brown, Secretary
the National Poultry Council, was read. This ha
reference to the Conference on Marketing, whi
is to be held on January 27th, and asked that t
S.P.B.A. should appoint delegates to the Confe
ence. After discussion it was agreed that M
Dowden and the Secretary should represent t
S.P.B.A.

The President read a letter from Major Swan
reference to the Marketing of Eggs. It was agree
that this letter should be circulated amongst me
bers of the Council in order that they may be ab
to digest it, and that it should be discussed aga
at the next meeting before the Conference.

Secretary's Report.—The Secretary reported th
255 new members had been elected duri
November. This was 110 more than the corre
ponding month of last year. Since 1st Septemb
over 1,000 new members had joined the Associ
tion. This was a very remarkable increase. H
had visited Edinburgh, Inverness, Beauly, Bu
and Liverpool, and addressed good meetings ther

Food Purchase Scheme.—The Secretary reported hat great interest had been taken in the Food 'urchase Scheme. The demand for foodstuffs rom members was increasing every week, and the resent week they had bought £1,250 worth of oods for their members.

Experimental Farm.—Referring to the Experiental Farm at Rudgwick, he said that Miss Hone ad been engaged as manageress, and had started er duties. They were not yet ready to commence he experiments. It was agreed that Miss Malcolm hould be asked to make use of the intensive house t Wellingham for the purpose of rearing table oultry to the crate stage intensively, and that the ommittee should meet at Rudgwick on January th.

Treasurer's Report.—The Treasurer submitted is report, which was agreed to be satisfactory, nd adopted.

"Eggs" Committee Report.—Mr. Kitson, chairian of the "Eggs" Committee, submitted his eport. He said the circulation was steadily ineasing, and financially they were in a very satisactory state. The report was adopted on the roposal of Mr. Kitson, seconded by Mr. Dowden.

It was agreed that the Association should take a tand at the Midland Poultry Federation's Festival t Birmingham on January 7th and the following ays.

Mrs. Fletcher Hearnshaw proposed that, in view f the poor attendance at the Crystal Palace, the ssociation should have no Stand there next year. his was seconded by Mr. P. Hedworth Foulkes, nd after discussion it was agreed that no Stand hould be taken.

Mr. Fletcher Hearnshaw drew attention to the llowing Order in the "London Gazette," in referrnce to the removal of poultry in areas affected ith Foot and Mouth Disease :—

> "No live poultry, hare or rabbit, or the carcase of any head poultry, hare or rabbit, shall be removed from an infected ace except with the permission in writing from an inspector officer of the Ministry or an inspector of the local authority, d then only in accordance with such conditions as may be ipulated in the permission authorising such movement. For e purposes of this rule, poultry includes domestic fowls, turkey, ese, ducks, guinea fowls, and pigeons."

The Secretary was instructed to write to the inistry of Agriculture to enquire whether birds an **infected place** meant a place or farm which as infected with Foot and Mouth Disease, and hether it applied to a restricted **area.** In the tter case he was to protest on behalf of the .P.B.A. against such an Order, involving, as it d, great hardship to poultry-keepers at a season the year when they would in the ordinary course events make good profits, more particularly in ference to poultry-keeping.

(It has been ascertained that the words "infected place" e to be taken as read: namely, that the removal of poultry m any farm which is declared to be infected with Foot and outh Disease can only be by permission of an inspector or icer of the Ministry. It does not refer to an infected area in ich the movements of cattle are restricted.—Secretary.)

Before the meeting terminated Mr. A. E. Hamlin announced that the Inland Revenue Authorities had abandoned their appeal to the High Court in the Hanson case in reference to the Income Tax assessment.

The next meeting of the Council was fixed for Wednesday, January 13th.

A WARNING.

A traveller recently called on one of our members, and offered meat and meat and bone meal for sale. The member in question refused to buy, but asked for a quotation for 5 cwt. of each. To his surprise he had a letter from the firm saying that they had dispatched 5 cwt. of meat meal and 5 cwt. of meat and bone meal to his station. He wrote by return notifying them that he would not accept delivery, but was returning the goods to the station whence they were dispatched, and did so. By return he received the following letter :—

> "Dear Sir,—We are informed that by issuing instructions to railway to return goods you assumed ownership. You could not give instructions to return goods which were not yours. You are still the owner of the goods, which are at present in the hands of the railway company. It is for you to decide whether or no you will take delivery, you can please yourself what you will do with your own goods, but so long as they remain with the railway they will cost you warehouse rent. We shall, of course, have to insist on your paying for the goods you have had from us."

Our solicitors, Messrs. A. E. Hamlin and Co., kindly advised as follows, and a copy of their letter has been sent to the member :—

> "It is quite clear that you gave no order for the goods, but only asked for a quotation to be sent you. You should write and inform the firm that the goods were not ordered by you, and that they are lying at the railway at their risk."

Our readers will now know what to do in similar circumstances. It is noticeable that the firm did not contend that the order had been given, but relied on the fact that our member had given instructions for the return of the goods, which was merely a quibble.

CHARCOAL.

I have received the following letter from Colonel Sadler. Perhaps my readers will like to express their opinions. I have never used charcoal myself, and do not remember ever recommending its use, but it is difficult to believe that it possesses injurious properties. In cases of indigestion I think it is distinctly valuable, but can anyone produce evidence that it prevents trouble, or are we still following in someone else's footsteps, and doing something because it has been done? However, here is Colonel Sadler's letter :—

> "I should be glad of the experience of scientific breeders on the effect of charcoal on baby chicks. I have been accustomed to feed charcoal to the birds at all ages from babyhood upwards. Last season I experimented with one incubator lot of chicks in a Miller brooder without charcoal and had no losses, except one chick, which sickened and died from some unexplained cause My man insists that charcoal is the main cause of loss through-

out the farms where it is fed. My one experiment seems to confirm his opinion, at least to the extent that charcoal is unnecessary ; but one experiment is a poor basis for practice."

Colonel Sadler will forgive my saying that his experiment proves nothing, certainly it does not confirm his man's opinion that charcoal is the main cause of loss on the farms where it is fed. At most it proves we can rear healthy chicks without its aid, that we already knew. It is probable that with chicks bred from healthy vigorous stock, properly managed, that it is unnecessary, but it may help materially when there is digestive trouble.

THE REGISTER.

By the time this is in print most of you will have received your copies of the Annual Register. Hearty congratulations are due to the Editor for producing the "best ever." He has always set a high standard, and has something to live up to next year. There are twenty-three articles on various subject to interest the poultry-keeper, besides many other tit-bits of information. The illustrations are both good and numerous. What a list of members too, but then you see the S.P.B.A. continues to grow so rapidly. We have ELECTED OVER ONE THOUSAND NEW MEMBERS SINCE THE FIRST OF SEPTEMBER. No other Society in the country can show anything to compare with this. We are sending out the Register as fast as can be, but please remember it takes some time to send out over 6,000 copies.

CHINESE EGGS.

Mr. G. F. Richardson thinks it may interest our readers to know that within the last month one firm alone dealt with over 1,000 tons of eggs from China. These are eggs banned by the U.S.A. as being unfit for human consumption, and (to quote Mr. Richardson) they are used by nearly every confectioner in this country. I remember reading some two or three years ago that some of these eggs had been examined by some scientific body in France, and were reported to be "teeming with bacteria." Well, we should be able to produce enough eggs here to keep the foreigner out. We are making a mistake, I venture to think, when we suggest that it is the imported egg which prevents our doing so. If we were a little more modest in respect to the profits we can obtain per hen, we might treat our problems more seriously. A cutting has been sent me this morning. It is an answer to a query, and is as follows :—

> "Starting a poultry farm. You can reckon that each hen will bring 12/6 profit a year, that your 200 hens, therefore, will give you roughly £2 8s. profit a week. You must hatch, roughly, 450 chicks to rear 200 pullets, this allowing for half cockerels and 50 deaths."

If a profit of 12/6 per hen could be made I think most people would be keeping hens. It is a pity to mislead the public in this way, especially when there are so many people who are only too willing to give up a good livelihood for what they believe to be an easy and pleasant means of makin a fortune. We all know the possibilities of poultr farming, and that it can be made to pay, but t say that a profit of 12/6 per bird could be mad is absurd in the extreme, and could only be writte by someone absolutely ignorant of what they wer writing.

FOOD PURCHASE SCHEME.

PRICES OF MASHES, ETC.

The following meals can be supplied in 5 cwt. lots and upward of one kind free on rail :—

Fish Meal (Pure White)	**20/0**	**F.O.R. London.**
,, ,, ,, ,,	**20/0**	**F.O.R. Bristol.**
,, ,, ,, ,,	**19/0**	**F.O.R. Swansea.**
,, ,, ,, ,,	**19/3**	**F.O.R. Tynemouth.**
,, ,, ,, ,,	**19/9**	**F.O.R. Grimsby.**
,, ,, ,, ,,	**19/3**	**F.O.R. Bradford.**

PRICES OF MASHES, PER CWT.

	Layers.	Growers.	Breeder
F.O.R. LIVERPOOL	**11/9**	**11/9**	**12/0**
F.O.R. LIVERPOOL ...	**12/0**	**12/6**	**13/6**
F.O.R. LONDON	**11/9**	**11/9**	**12/6**
F.O.R. LEITH	**10/9**	**10/6**	**11/9**
F.O.R. LEICESTER	**11/0**	**11/0**	**11/9**
F.O.R. GREENOCK	**12/3**	**12/6**	**13/3**
F.O.R. KING'S LYNN ...	**11/6**	**11/6**	**11/9**
F.O.R. BELFAST	**13/0**	**12/9**	**13/0**
F.O.R. BRISTOL	**11/9**	**11/9**	**12/9**
F.O.R. SOUTHAMPTON ...	**11/9**	**12/0**	**12/3**
F.O.R. PLYMOUTH	**12/9**	**13/0**	**12/9**
F.O.R. ABERDEEN	**12/3**	**11/9**	**13/9**
F.O.R. HARROGATE ...	**12/9**	**12/6**	**13/6**
F.O.R. GLASGOW	**12/3**	**12/3**	**12/9**
F.O.R. STAFFS	**11/9**	**11/9**	**13/0**
F.O.R. IPSWICH	**11/6**	**12/9**	**12/9**
F.O.R. SUSSEX	**11/6**	**11/6**	**12/6**

		Per C
MAIZE GRITS ...	**F.O.R. LONDON ... ...**	**12**
MAIZE GRITS ...	**F.O.R. IPSWICH ... ...**	**12**
S.G. OATS	**F.O.R. LONDON ... ...**	**13**
S.G. OATS	**F.O.R. SUSSEX ... ...**	**12**
S.G. OATS	**F.O.R. BRISTOL ... ...**	**13**
MEAT & BONE MEAL	**F.O.R. LONDON ... ...**	**13**
MEAT MEAL	**F.O.R. LONDON ... ...**	**14**
MAIZE GERM MEAL	**F.O.R. LONDON ... ...**	**10**
MAIZE GERM MEAL	**F.O.R. IPSWICH ... ...**	**10**
MEAT & BONE MEAL	**Carriage Paid ... ...**	**15**
MEAT MEAL	**Carriage Paid ... ...**	**15**

APPLICANTS FOR MEMBERSHIP.

Perrin, Rubin, Beulah. Branksome Avenue, Stanford-le-Hope, Es
Wedgwood, P. J., Rose Cottage, Prescot, Lancs.
Pickup, W., "Courtfield," Balmoral Road, St. Annes-on-Sea.
Morgan. L. M., Ryefield, Bere Regis, Wareham, Dorset.
Thompson, R. M., 57, Garnett Street, Lancaster.
Richmond, T. J., Parkhill, Kilwinning, Ayrshire.
Holmes, H. R. J., 350, Woodstock Road, Oxford.
Alley, Miss P., Ballinlough Castle, Clonmellon, Co. Westmeath, Irela
Ward, W. T., Knowl Farm, Uppermill, Oldham, Lancs.
Green N., Craigmullen, Dundrennan, Castle Douglas
Brown. L. J., Bridge Cottage, Bromham, near Bedford.
Perring, A. R. M., St Benet's Cottage, Callow End, Worcester
Smith, J., 37, Bismarck Street, Beeston Hill, Leeds, Yorks.
Williams, Mrs. Lloyd, Plas Dinorwic, Port Dinorwic, N. Wales
Turner, F. N., Smallfield, Surrey.
Tingle. E. A., 68, Stamford Road, Kettering.
Goffin, F. T., Boulding House, West Bradbourne, Ashford.
Hartley, F., New Westfield, Upper Marsh, Oxenhope, near Keigh
Peek, The Hon. Mrs., Hazlewood, Loddiswell, S. Devon.
Russell. C. R., The Grange, Attleborough.
Davies, Mrs. E., "Aeron," Hebron S.O., Carmarthenshire, S. Wa
Davies, W. L., "Aeron," Hebron S.O., Carmarthenshire, S. We
Ormsby, O. C., 194, Staines Road. Sunbury-on-Thames.

Nicoll, T., Pine Grove, Dundee.
Cowlishaw, Mrs., Oak Lodge, Loudwater, Bucks.
Malcolm, R., Stone Cross, Crawley Down, Sussex.
Haxton, L. C., "Woodside," Great Canfield, near Dunmow, Essex.
Sommerville, J. Sommerville's P.F., Cold Norton, Chelmsford.
Smith, L. B., Bekesbourne P.F., near Canterbury, Kent.
Wright, S. J., 188, Stanley Park Avenue, Liverpool.
Pressley, Mrs. F., 568, City Road, Sheffield.
The Matron, Dalbeth Girls' School, Tollcross, Glasgow.
Burne, Mrs. J., W., Leesthorpe Hall, Melton Mowbray.
Ramsell, T., Holly Bough Villas, Donisthorpe, near Burton-on-Trent.
Todd, J., Holly Brook Farm, Birkdale, Southport.
Croudace, D. de J., Hewitt House, Willesborough, Ashford, Kent.
Cole, Miss M., Merthyn Villa, 181, Newbridge Hill, Bath.
Crang, R., "Elmcott," East Brent, Somerset.
Lea, Mrs. H., Brentor, Hafod Road, Hereford.
Mayston, N., Woodview, Horeham Road, East Sussex.
Holmes, H., "St. Malo," Woodgrange Avenue, Langdon Hills, Essex.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

KEIGHLEY AND DISTRICT BRANCH.

The first of a series of Open Egg Shows will be held in the Temperance Hall, Keighley, on January 6th, 1926. Entries are invited for seven classes.

Classes—Hatching Eggs: 1, Six White hen eggs; 2, Six Tinted hens eggs; 3, Six Brown hen eggs. Classes—Eggs for Consumption: 4, Six White hen eggs; 5, Six Tinted hen eggs; 6, Six Brown hen eggs. Class 7, Six Duck eggs (hatching or consumption). Judge: Mrs. Clay, M.B.E., Long Preston.

A Silver Challenge Trophy will be offered for most points gained in the whole series. Points obtained in egg classes at the Annual Show in November, 1926, will be allowed to score. Mrs. Wilson will give a Silver Spoon for most points gained in the duck egg classes. No entry fee. Awards of merit will be made and particulars communicated to local press. After awards have been made the eggs will be sold, proceeds to go to the Society. Your hearty co-operation is invited. Packages of eggs should be addressed to the Hon. Secretary, Keighley and District Branch of S.P.B.A., and should arrive not later than 6.15 p.m. Judging will commence at 6.30 p.m. After the sale of eggs, Mr. Frank Snowden will open a discussion on any subject relative to poultry breeding.

Mr. Wm. Hamnett, Myrtle P. F., Blackpool, has kindly offered a sitting of eggs, value 63/-, as a prize for a guessing competition. Proceeds to go to the Annual Show Funds, and particulars of which may be obtained from Mrs. Wilson, Hon. Secretary, "Minorca," Denholme, Bradford. 'Phone: Thornton 178.

LIVERPOOL AND DISTRICT BRANCH.

A very well attended Lecture and Egg Show of the above branch of the S.P.B.A. was held at the Headquarters, "The Albany Room," Palatine Cafe, Lord Street, Liverpool, on Saturday evening, the 12th of December, 1925, at 6.30 p.m. Mrs. E. Douglas Kendall was in the chair.

Mr. Tom Newman started the ball rolling with a very interesting and instructive paper on "The Intensive System." At the finish of his paper some very interesting questions were put to him, which he answered in his usual easy style. As one of our members remarked, "He's a blinking encyclopaedia of poultry." As there were no further questions forthcoming, the chairman called upon Dr. J. P. Hall to make a presentation of a Silver Cake Stand and Case of Fruit Knives to Mr. Newman as "an appreciation from the members of the Liverpool Branch of the S.P.B.A. upon his marriage."

Dr. Hall, in making the presentation, gave us a very witty speech, and in his remarks he said that professionally he thought that Mr. Newman looked better since he had joined the noble army of Benedicts, and that all members of the S.P.B.A. should be very grateful to Mrs. Newman for the way in which she is looking after the most-valued servant of the S.P.B.A. and also of the Poultry Fancy.

Mr. Newman, in replying, thanked Dr. Hall and the members of the Liverpool Branch for their appreciation of his services, and thanked them on behalf of Mrs. Newman for the presentation.

Mr. E. J. Meeking also gave an equally interesting paper on "What are the Prospects of Commercial Egg Farming?" His paper dwelt on facts, and his reminiscences of disposing of his surplus White Leghorn cockerels caused much laughter among his audience. After his paper he was called upon to answer many intrigued questions.

Mr. Harry Banks, in proposing a vote of thanks to Mr. Newman and Mr. Meekings, endorsed the remarks of Dr. Hall, and thanked them for their enjoyable papers and answers on behalf of all the members present.

Mr. J. W. Riding seconded the vote of thanks, which was carried unanimously, amid great applause.

A vote of thanks to Dr. Hall was moved by Mr. Crosthwaite, seconded, and carried unanimously.

With a vote of thanks to the Chairman, the proceedings terminated one of the most enjoyable evenings in the history of the Liverpool and District Branch.

Prize-winners, Egg Show.—1st and 5s. Special, Brown Eggs, Mr. Wm. Burns; 2nd, Mr. P. J. Wedgwood. 1st and 5s. Special, Tinted Eggs, Mr. Richard Handley; 2nd, Miss M. Cooper. 1st, White Eggs, Mr. Isaac Mundy.

R. J. THOMAS, 9, Grey Road, Walton, Liverpool,
Hon. Secretary.

EAST DEVON BRANCH.

The Second Annual General Meeting and Dinner, followed by an Invitation Dance, will be held at Trumps' Cafe, Sidmouth, on Thursday, January 7th, 1926. General Meeting at 6.45 p.m. Music will be supplied by the Blue Lagoon Band. A portion of the proceeds will be allocated to branch funds, the remainder being devoted to a cup presented by the branch for competition at the County Laying Trials. The cup will be presented to a representative of the County Authority by the Vice-President at the dinner. You are particularly requested to support the industry and your county by making every effort to attend. There are some important questions to be dealt with at the General Meeting which affect every poultry farmer. Application for dinner or dance tickets must be received not later than December 31st. Tickets: Dinner, 5s. 6d. each; Dance 5s. 6d. each.

Capt. H. JELLEY, Hon. Sec., Broad Oak, Ottery St. Mary. 'Phone: 40 x 2 Ottery.

Members who desire to have their copies of "Eggs" bound into volumes, but who wish the advertisements omitted, can have this done by instructing their Bookbinder to this effect, and he will see that these pages are not included.

MEMBERSHIP OF THE S.P.B A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, of farmers on a large scale to render themselves eligible for membership of the S.P.B.A This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN, The Beeches, Rudgwick, Horsham, Sussex. The financial year began on 1st September.

Answers to Queries.

Continued.

R. H. (Newcastle) has 11 White Wyandottes and 5 Leghorn pullets, hatched at the beginning and end of April respectively, which commenced to lay four weeks ago, and are averaging three or four eggs a day from the White Wyandottes and two or three from the Leghorns. The two breeds are kept separately intensively, the feeding consists of half ounce of grain per head in the litter in the morning, mash at mid-day, and one and a half ounces of grain per head at 4 p.m. The mash consists of 12 parts Sussex ground oats, 6 bran, 9 middlings, and 3 fish meal (parts are by weight). His trouble is, that the birds are not keen on the mash. He is getting very thin-shelled eggs from the Leghorns, and likewise from the Wyandottes, and a number of the Leghorn eggs are broken in the nest. First, in reference to his samples. The ground oats, although not Sussex ground, are very good value for the money, and would answer the same purpose. The bran is of fair average quality. The same remark applies to the middlings; they contain rather a lot of bran, but are not too bad. Fish meal at 4s. 6d. stone works out at 36s. per cwt., so one wonders how my correspondent hopes to make poultry pay if he buys foodstuffs at these prices. However, it is a good sample. Now as to his trouble. I think he would be well advised to alter his mash and give a heavier feed of grain at night. It is very costly to use such a high percentage of ground oats, and the thin-shelled eggs are probably due to the fact that there is a lack of lime in the food. I would suggest he uses the following: 1lb. bran, 1 alfalfa meal, 4 middlings, 1 Sussex ground oats, 1 maize meal, and one fish meal, and as his birds are kept intensively would add to this the following mineral mixture at the rate of five ounces to every ten pounds of mash: 60 parts steamed bone flour, 20 parts common salt, and 20 parts powdered limestone grit, or oyster shell. This should help him in the matter of the soft-shelled eggs. Further, he would be well advised to give nearly one handful of grain between every five birds in the litter as the first feed in the morning, have the dry mash hoppers open all day, and give the birds a good heavy feed of grain as the last feed at night. One and a half ounces per bird is not sufficient for these long nights, and if they will eat 2½ ounces it will be all the better.

H. H. (Kingford) writes to say that his young ducks, which began to lay towards the end of October, have now started to moult. What is to be done, and what can be the reason? He feeds them generously on maize in the morning and mash at night, consisting of: 3 parts bran, 3 maize meal, 3 sharps, and one of fish meal, by measure. It is always difficult to say what is the cause of the ducks going into a moult. If they have been frightened in any way this may possibly account for the trouble. I think the feeding would be better if the bran were reduced to two parts, and the sharps increased to five. There is nothing to be done in this matter except feed generously, and keep the ducks as quiet as possible.

F. C. (Chard) while collecting his eggs in one of his laying houses noticed one of the birds on the nest appeared to be straining rather badly. While watching her she laid an egg with no shell on it at all, with what appeared to be a kind of white membrane attached to one end. He was going to pick it up before she should step on it, but before he could do so she laid another, also shell-less, which was joined to the first egg by the membrane. This one she broke in the nest with her feet before my correspondent could pick them up. The first egg was the size of a good two-ounce egg, but the second slightly smaller. I think "F.C." is possibly feeding on too stimulating a ration, and this would account for the performance of this hen, but he has not sent me any particulars, so I can hardly express a definite opinion. It does not always follow that what may be stimulating for the individual is stimulating for the flock, so I would not advise him to change unless he sends particulars. Very often when the ovary is very active a normal ration may prove a little too stimulating for an individual hen.

C. C. (Crawley Down) is giving his birds a wet mash consisting of the following: Ground oats 5 lbs., maize meal 8½ lbs., middlings 12 lbs., bran 6½ lbs., fish meal 9 lbs., yeast 2 lbs. with two full buckets of mangolds, making five full buckets whe mixed. He would like to know whether he is giving too muc of any food and not enough of another. In my view, he is givin too much fish meal, which might easily be reduced to 6 lbs., an as he is using presumably pulped or cooked mangolds I woul omit the bran and increase the middlings by another 6 lbs., a this should give sufficient bulk to the mash.

HARPER ADAMS' AGRICULTURAL COLLEGE, NEWPORT, SALO

POULTRY LAYING TRIALS, 1925-1926

Report for the First Period.

The thirteenth series of Poultry Laying Trials, organised b the College, started on 1st November, the birds having con menced to arrive on 20th October. The entries have taken u practically all the available accommodation, a total of 1,81 birds being entered. Of these, 1,602 are competing birds, and 21 reserve birds. The trials are organised in four divisions:- Championship, Small Flock, Single Birds, and Ducks Th Championship Trials comprise 24 pens of 10 birds each, and ar divided into Light and Heavy Breed Sections. The Small Floc Trials consist of 192 pens of seven birds each, and form seve distinct sections. Eighty-four birds are under test in the Singl Bird Division, and the Duck Trials, a new feature in the Colleg Trials, consist of ?1 pens of seven birds each.

The first period terminated on 28th November, the extren variations in production which mark the early periods of th trials being again a feature—several pens have put up goo records, but many birds have not yet come into lay, an moulting has been prevalent The production figures on th whole are an improvement on previous years, the individua average being just over 11 eggs per bird in the Poultry Section and a fraction less than 14 eggs per bird in the Duck Section.

The following are the leading positions at the end of th first period:—

SUMMARY OF THE LEADING PENS.

CHAMPIONSHIP TRIALS.

Section 1 Light Breeds.—Frank Snowden (W.L.), Keighley Yorks, 187 eggs. F. A. Welch (W.L.), Cheltenham, 183; G. L. Me calfe (W.L.), Lechlade, Glos., 156; H. Sutton and Sons (W L Preston, 159.

Section 2. Heavy Breeds.—E. Watson (W.W.), Colne, Lancs 219; G. B. Metcalfe (R.I.R.), Lechlade, Glos., 176; Mrs. M. Crooke (W.W.), Upper Deal, Kent, 164, Tom Barron (W.W.), Preston, 15

SMALL FLOCK TRIALS.

Section 1. White Leghorns.—Miss H. Baylis, Stratford-on Avon, 123; Capt. J. Thompson Shrewsbury, 110; Mrs Percy, Ho net, Salop, 101. G. L. and H. B. Gibson, Billericay, Essex, 99; Si Amos Nelson, Ltd., Skipton, 99

Section 2. White Wyandottes.—Dr. A. E Harrisson, Dave try, 121; Frank Snowden, Keighley, Yorks, 119; C. E. D. W Fre man, Llanfairpwll, Anglesey, 117; S. and T. Greenall, Granthar Lincs, 118; Capt. J. Thompson, Shrewsbury, 118.

Section 3. Rhode Island Reds.—C.W.S., Ltd., Whalley, Lancs 118; W. Mayor, Leyland, Lancs., 104; Kingto Bagquize P. Farn Abingdon, Berks, 96; Tom Carter, Abram, Lancs., 90; Miss C. I Roads, Bletchley, Bucks., 86

Section 4. Light Sussex.—F. Rossall Sandford, Shrewsbur 113; F. R. Welch, Bewdley, Worcs, 112; Capt. A. A. Plimpto Beverley, E. Yorks., 100; A Howard, Maidenhead, 94, M. W Slade, High Wycombe, Bucks., 95.

Section 5. Black Leghorns.—W. A. Lansley, Whitchurc Salop, 92; R. Rodwell, Nelson, Lancs., 91; R. A. Fawssett, Ra norshire, 85; C.W.S., Ltd., Whalley, Lancs, 69.

Section 6. Any Other Light Breed.—S. Street-Porter (C Whites), Ely, Cambs., 85; C.W.S, Ltd (An.), Whalley, Lancs. 7 Col. S Sandbach (Bf. L.), Abergele, North Wales, 75; H. Lynde Lemon (Bl. Br.), Devizes, Wilts. 73.

Section 7 Any Other Heavy Breed.—Miss P. Mills (Rks. Bishop's Castle, Shropshire, 111; Capt. A. A. Plimpton (Rks. Beverley, E. Yorks, 101; J. F. Cocks (Col. Wyan.), Ware, Hert 92; P. E. White (Rks.), Market Drayton, Salop, 85.

SINGLE BIRD TRIALS.

Section 1. White Leghorns.—F. G. Mansell, Aldridge, Staff 24; Tom Barron, Preston, 21; Rev. H. W Bush, Bath. 22.

Section 2. White Wyandottes.—Tom Barron, Preston, 25; and F. Greenall, Grantham, Lincs., 24; Frank Snowden, Keighle Yorks. 24

Section 3. Any Other Light Breed.—K. A. Crawford (W. Br Dilham, Norwich. 20.

Section 4. Any Other Heavy Breed.—Chivers and Sons, Lt (L.S.), Cambridge, 25; C.W.S., Ltd., (R.I.R.), Whalley, Lancs., 2 A Hughes (L.S.), Malpas, Cheshire, 24.

Duck Section.—S. Ward (K.-C.), St. Neots, 139; Hugh B Ca rington (F. and W.R.), Crowhurst, Sussex, 117; H. S. Godsma (W.R.), Ashford, Kent, 115· O. C. Brown (K.-C.), Scunthorpe, Linc 111; G H. H Simmons (K.-C.), Brimscombe, Glos., 109.

HANTS COUNTY LAYING TRIALS.

Report for Second Period Ending 15th December, 1925.

Figures are Eggs and Points respectively.

Section A.—Mr. A. F. C. Holdaway (W.L.), 48, 560; Mr. B. King W.L.) 35, 393; Messrs. F. and C. Brundett (W.L.), 44, 526; J. C. lexander (W.L.), 38, 444; H. Record (W.L.), 38, 405; Mrs. T. F. ordery (W.L.), 23, 243.

Section B.—Miss W. E. Clarke (R.I.R.), 48, 522; J. H. Thompson W.W.) 30, 330; Capt. R. Mackenzie (W.W.), 43, 517; Mrs. T. P. ordery (W.), 20, 241; Mrs. Guy Happer (R.I.R.), 44, 470; Capt. R. Mackenzie (R.I.R.), 16, 165.

MIDDLESEX AGRICULTURAL EDUCATION COMMITTEE.

COUNTY LAYING TRIAL, 1925-26.

Report for Second Period—November 12th to December 9th, 1925.

1. HEALTH.—Weather conditions during this period have been rather severe, but the general health has been well maintained. Two pullets have passed through hospital (No. 15: five days, and No. 44: one day) with colds, and preventative treatment was adopted in the case of the others.

CASUALTY.—The W.W. Pullet No. 131 reported lame last month appeared to be suffering from a dislocated hip, and was replaced on December 5th.

MOULTING AND BROODINESS.—Twenty-two birds are in or are recovering from partial moult, and broodiness necessitated three birds, Nos. 58, 69, and 74, being confined to the broody coop for short periods.

2 EGG PRODUCTION.—Twenty-five more pullets commenced to lay during the period, thus of the 147 birds at the trial, 45 have not yet laid. Production has improved, and the size of eggs is also a little better

SUMMARY OF LEADING PENS.

Figures are Eggs and Points respectively.

Section 1A. (Light Breeds).—Miss E. Elvidge (W.L.), 63, 682; Countess of Strafford (Bk. Br.), 40, 427; Dr. H. Corner (W.L.), 29, 323; Mrs. D. A. Fowler (B.L.), 43, 442; Sir J. Fitzgerald (W.L.), 45, 472; W. Poupart (B.Br.), 35, 373.

Section 1B (Heavy Breeds).—Sir J. Fitzgerald (L.S.), 63, 748; H. Pickford (R.I.R.), 53, 628; A. R. Winpenny (W.W.), 70, 752; E. Fownes (W.W.), 68, 740; R. F. Daintree (R.I.R.), 57, 651; G. Rose (R.I.R.), 42, 444.

Section 3. Single Birds, Light Breeds.—J. N. Williams (W.L.), 21, 225; R. W. Baker (W.L.), 15, 152, A. W. Brown (B.L.), 16, 208; J. N. Williams (W.L.), 13, 130; F. E. Robinson (W.L.), 1, 10; W. Pullen (W.L.), 1, 10.

Section 3. Heavy Breeds.—G. G. May (W.W.), 21, 212; F. E. Robinson (W.W.), 19, 215.

ANGLESEY AGRICULTURAL EDUCATION COMMITTEE.

ANGLESEY COUNTY EGG-LAYING TRIALS.

The figures for the second period of four weeks is now to hand There are 18 pens in the test with four birds to a pen. All the birds are laying, and a large number of them are putting up a very good record. One can expect an improvement in the size of the eggs. The birds are all healthy and vigorous

The following is a record of the leading pens in the two sections for the second period (12th November to 9th December), together with the scores for the first period (15th October to 11th November). Marks for the various grade of eggs are allowed on the scale recommended by the Ministry of Agriculture and Fisheries.

Figures are Eggs and Points to date respectively.

Heavy Section.—Mr. Freeman, Penmynydd (W.W.), 168, 2007; Mr. Evan Williams, Llangefni (L.S.), 136, 1648; Mr. W. M. Wooff, Brynteg (W.W.), 164, 1637; Miss G. N. Holme, Beaumaris (W.W.), 161, 1545.

Light Section.—Mr. J. N. Williams, Holyhead (W.L.), 159, 1730. Mr. John Jones, Llangefni (W.L.), 156, 1603; Mr. John Jones, Llangefni (W.L.), 141, 1523; Dr. J. O. Williams, Bryngwyn (W.L.), 132, 1498

GRIFFITH JONES, Director of Agriculture

NORTHERN UTILITY POULTRY SOCIETY.

LAYING COMPETITION, 1925-26.

First Report—November 1st to November 28th, 1925.

All competitors arrived in splendid health for the test, not a single bird being objected to or rejected, although quite a few will be quite a long time before they can be expected to contribute to the egg basket On the other hand, some that in appearance had been laying some time are likely to moult.

The weather for the first few days was unsettled, and open frost set in on the eighth day, and has continued up to close of the first month. But although the frost has been unusually severe, we have had a good many hours of sunshine, very little wind, and no fog here. Altogether this period, in spite of the frost, has been pleasant for birds and attendants.

The health has been excellent, not a single bird requiring hospital treatment, and the yield of eggs has shown a steady rise.

DUCK SECTION.

In contradistinction to the pullets, these competitors have practically ceased to lay, and for no other reason, I think, than the intense ground temperature. All are in good health, No 62 being the only duck to continue in lay for the whole period

EGG PRODUCTION OF LEADING PENS.

Figures are Eggs and Points to date respectively.

Section No. 1. Championship.—Leslie Williams (W.W.), 84, 84; Mrs M. Crookes (R.I.R.), 59, 59.

Section No. 2. White Leghorns.—Richard Harrison, 88, 88; William Dugdale, 81, 81; Robert H. Fryers, 77, 77; Major H. F. R. Griffith, 72, 72.

Section No. 3. White Wyandottes.—Dr J. E. Helm, 98, 98; John S Fothergill, 95, 95; Arthur White, 91, 91; Margaret Wilson, 82, 82

Section No. 4 Any Other Variety (Non-Sitting).—K. A. Crawford (W. La B.), 58; James Stuart (B.L.), 31; Owen Rawlinson (B.L.), 28; Mrs J. H. Hill (B.L.), 24.

Section No. 5. — Any Other Variety (Sitting). — E. A. Tingle and Son (R.I.R.), 91 91; Gilbert A. Leonard (B.R.), 85, 85; Severn Model Poultry Farm (B.R.), 59, 59; J. Ashworth (R.I.R.), 50, 50.

Section No. 6. Small Breeders.—Mrs. Clara Egar, 48, 48.

Section No. 7. Cross-Breds.—Mrs. Clara Egar, 33, 33.

Section No. 8. Two Birds.—Eustace A. Wilkinson (W.W.), 31, 31; Mrs. E McKeown (W.W.), 22, 22; A. Hargreaves (W.W.), 16, 16; Henry Purves (W.W.), 16, 16; Andrew Vasey (W.L.), 10, 10.

Section No. 9. Single Bird.—Crossgar Pedigree U.P. Farm (R.I.R.), 21, 21; Severn Model Poultry Farm (B.R.), 20, 20; R. A and A. M. Johnson (W.W.), 19, 19; Miss R. K. Tallis (W.W.), 8, 18

Section No. 10. Local Section.—Richard Harrison, 56, 56; Albert Helliwell, 52, 52; John Gill, 48, 48.

Section No. 11. Ducks.—E. W. Putnam (K.-C.), 38, 38; Wilson Beattie (K.-C.), 27, 27; G. H. H Simmons (K.-C.), 22, 22; Oscar C. Brown (K.-C.), 16, 16.

Section No. 12. Single Ducks.—G. H. H. Simmons (K.-C.), 21, 21 R. A and A. M. Johnson (K.C.), 13, 13; W. E. Haycock (K.-C.), 11, 11; A. Denby Wilkinson (K.-C.), 6, 6.

Telephone No.: Maidstone 542.
Maidstone Poultry Farm,
Barming, Nr. Maidstone.
18th December, 1925.

To the Editor of "Eggs."

Dear Sir,—At the Poultry Club's Utility Committee Meeting, held on the 11th December, I was requested to write the Poultry Press and ask them to announce through their columns to members of the Poultry Club that we shall be pleased to receive any suggestions or resolutions that they may have, which would lead to a useful discussion and the advancement of that side of the fancy which this committee represents.

If members will send along to me their suggestions I will see that they are laid before the committee as early as possible.

Yours faithfully,
W. VENN CARR,
Hon. Sec. Poultry Club,
Utility Committee.

Market Report.

MINISTRY OF AGRICULTURE RETURNS, WEEK ENDING FRIDAY, 18th DECEMBER, 1925.

GRAIN AND FEEDING STUFFS.—British wheat is in rather slower demand and cheaper at most markets, the average quotation being 12s. 8d. per cwt. as compared with 12s 11d. last week. Imported wheat is also cheaper, No. 1 Manitoba averaging 15s. per cwt., a reduction of 9d. per cwt. on the week. British malting barley continues to meet a slow trade, but recent rates are maintained, except at London, where average prices have declined from 12s. 6d. to 12s. per cwt. Trade for home-grown feeding barley has varied at the different markets, but the average quotation is unchanged at 8s. 8d. per cwt. Imported feeding barley is generally in little demand, but is dearer at Liverpool and London. English oats are in fair request and maintain recent values, while at London prices have advanced owing to an improved trade. Imported oats mostly sell at late rates.

Bran is in moderate supply and recent rates are fully held, while coarse middlings are in little request and cheaper at Liverpool and London. Meals are in rather better demand and quotations for barley and maize meals have advanced at some centres, while other descriptions sell at recent values. Oilcakes generally meet an improved trade, linseed cake being dearer at all markets, while cotton-seed cake is mostly unchanged in price.

MILLERS' OFFALS.—Bran (British): Bristol, £9; Hull, £7 17s; Liverpool, £8 10s; London, £8 2s. Broad Bran: Hull, £9 7s; London, £9 2s. Middlings:—Fine (Imported): London, £9; Coarse British): Bristol, £9 7s; Hull, £9; Liverpool, £8 10s; London, £7 17s. Pollards (Imported): Bristol, £7 12s; Hull, £6 15s; Liverpool, £6 15s, London, £6 17s. Rice Bran: Bristol, £7 10s; Liverpool, £7 2s. MEAL.—Barley Meal: Bristol, £10 7s; Hull, £10; London, £10 7s. Maize Meal: Bristol, £11 10s; Hull, £10 7s; Liverpool, £10 2s; London, £10 7s. Maize Meal (S. African): Bristol, £9 17s; Hull, £8 10s; Liverpool, £8 12s; London, £9 2s. Maize Germ Meal: Hull, £10 5s; London, £9 15s. Maize Gluten Feed: Bristol, £11; London, £9 15s. Locust Bean Meal: Bristol, £10; Hull, £10; Liverpool, £9 10s; London, £9 12s. Bean Meal. Bristol, £13 10s; Hull, £11 13s London, £12 5s. Fish Meal: Bristol, £21 10s; Hull, £20 10s; Liverpool, £20; London, £20.

EGGS AND DEAD POULTRY.

British eggs continue to become more plentiful, and sales are slow at declining quotations. Selected imported eggs are also considerably reduced, but "seconds" hold their price. Dead poultry is plentiful. Turkeys are arriving in good condition and the demand has improved, best quality birds being a little dearer on the week at 1s. 4d. to 1s. 6d. per lb. compared with 1s. 8d. to 1s. 10d. in the corresponding week last year.

Week-end Prices—Eggs (per 120): British, 30s 6d; Irish, 29s 6d, 28s 6d; Danish, 31s 3d, 30s 3d; Dutch, 30s 0d, 27s 6d; French, 29s 0d, 27s 9d; Belgian, 29s 6d, 28s 6d; Italian, 24s 6d, 20s 6d: Egyptian, 11s 6d, 11s 0d; Lithuanian, 19s 6d, 17s 6d; Polish, 17s 0d, 15s 6d; Chinese, 15s 6d, 13s 3d; Russian, 17s 6d, 14s 6d; Australian, 23s 6d, 22s 6d; Styrian, 19s 0d, 17s 9d; Argentine, 16s 3d, 14s 6d; American, 18s 6d, 18s 0d; Californian, 21s 9d, 20s 9d.

Dead Poultry (per lb.): Fowls—Surrey, 1s 5d, 1s 2d; Irish, 1s 2d, 1s 0d; Others, 1s 3d, 1s 1d. Ducks, 1s 4d, 1s 1d. Geese, 11½d, 10½d. Turkeys, 1s 5d, 1s 3d.

EGGS.

Per Doz.—Ashford: First, 3s 1d; Second, 2s 11d. Birmingham. First, 3s 2½d; Second, 2s 9½d. Bridgwater: First, 2s 11½d; Second, 2s 7d. Chelmsford: First, 3s 1¾d; Second, 2s 9d. Colchester: First, 3s 0d; Second, 2s 8½d. Doncaster: First, 4s 0d; Second, 3s 9d. Dorchester: First, 2s 5½d; Second, 2s 4½d. Exeter: First, 3s 3d. Hereford: First, 2s 6d. King's Lynn: First, 3s 0d; Second, 2s 9d. Llandilo: First, 3s 6d; Second, 3s 3d. Mold: First, 3s 9d; Second, 3s 6d. Newport (Mon.): First, 3s 3d; Second, 3s 0d. Norwich: First, 3s 3d; Second, 2s 10d. Oswestry: First, 2s 9d. Penzance. First, 2s 6d; Second, 2s 5d. Saffron Walden: First, 3s 1¾d; Second, 2s 8½d. St. Ives (Hunts): First, 3s 3d; Second, 3s 1d. Salisbury: First, 2s 8d; Second, 2s 6d. Skipton: First, 3s 6d; Second, 3s 3d. Truro: First, 2s 4d. Welshpool: First, 3s 4d; Second, 3s 0d. *Carlisle: First, 3s 0d. *Derby: First, 3s 2d. *Ipswich: First, 3s 3d. *Lincoln: First, 3s 6d. *Shrewsbury: First, 3s 3d; Second, 3s 0d. *York: First, 3s 8d; Second, 3s 7d.

FOWLS.

Per lb.—Birmingham: First, 1s 3d; Second, 9d. Doncaster: First, †5s 3d; Second, †4s 6d. Exeter: First, 1s 3d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 8d; Second, 1s 5d. Newport (Mon.): First, 1s 6d; Second, 1s 2d. Skipton: First, 1s 6d. Truro: First, 1s 4d. *Derby: First, †5s 6d; Second, †4s 0d. *Ipswich: First, 1s 6d; Second, 1s 4d. *Lincoln: First, †5s 6d; Second, †4s 0d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 0d; Second, †4s 6d.

(Continued at Foot of Next Column).

"Eggs."

The Official Organ of the Scientific Poultry Breeders' Association.

Wednesday, December 23rd, 1925.

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Contributions.—The Editor will always be pleased to consider contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence of "Eggs" to their poultry-keeping friends.

Subscription to "EGGS," 12s. 8d. per annum; 6s. 4d. for six months, 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, The Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beeches, Rudgwick, Sussex.

All communications with regard to Advertisements should be addressed to Mr. S. H. Burles, "Eggs," 94, Farncombe Street, London, S.E.16. Telephone: HOP 894.

Classified Advertisements Rates will be found at top of first page of classified advertisements.

XMAS HOLIDAYS.

For our issue, dated December 30th, we shall be closing for press one day earlier than usual. New advertisements and alterations of copy for that issue must therefore reach us on or before FIRST POST THURSDAY, DECEMBER 24th.

DUCKS.

Per lb.—Birmingham: First, 1s 2d; Second, 10d. Doncaster: First, †6s 0d; Second, †5s 0d. Exeter: First, 1s 2d. Hereford: First, 1s 2d; Second, 1s 0d. Llandilo: First, 1s 8d; Second, 1s 5d. Skipton: First, 1s 5d. Truro: First, 1s 4d. *Derby: First, †5s 6d; Second, †4s 6d; *Ipswich: First, 1s 4d. *Shrewsbury: First, 1s 6d; Second, 1s 3d. *York: First, †5s 6d; Second, †5s 0d.

* At these markets the prices quoted are for sales by producers direct to consumers. At other markets prices are those paid to producers by retailers. † Per head

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EGGS

THE OFFICIAL ORGAN OF
THE
SCIENTIFIC POULTRY BREEDERS ASSN.

(Founded in 1912 by RANDOLPH MEECH).

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Vol. XII. No. 27. Copyright.

Edited by TOM NEWMAN.
Price TWOPENCE.

Twelve Months Post Free 12/8
Six Months ,, ,, 6/4
Three Months ,, ,, 3/3

A Happy New Year to You! But,

IF YOU WANT TO BE REALLY HAPPY AND FREE FROM WORRY YOU MUST SEND YOUR ORDERS TO

Consistent

1922.

A.K.F., of Berkhamsted, writes:
"I have trapnested the pullets I bought from you in September, and they are already **all** of them L2, although they have still some weeks to spare to complete the winter test."

Estry, Kent.
"I got 52 chicks out of the 52 eggs you sent me (Glevum Incubator)."
(Sgd.) H. E. M. A.

1924.

Mrs. Esplin, Inchture, N.B., writes (4/1/24):
"I had 34 lovely chicks from the eggs I got from you last year—only one infertile. I am so pleased with your stock . . . . we never had so many eggs in winter before . . it must be the STRAIN."

Ilkeston, Derbyshire.
"Received chicks, for which I thank you . . . for robustness and type they surpass anything I have seen—they have settled down and doing splendidly."
(Sgd.) J. W.

Success.

1923.

Winchmore Hill, 11/1/23.
"I am so very satisfied with the . . . pullets hatched from your sittings last season; they have been wonderful layers this winter and such good sized eggs."
(Sgd.) J. A.

Exeter, 20/2/23.
"I have tested the Rhode eggs this evening . . . and find **as last year** 100 per cent. fertility. This again speaks well for your stock, and I am delighted. . . The chicks are all doing fine . . . sturdy, and growing first rate."
(Sgd.) H. F. C.

1925.

Mrs. G. W. Darras Hall writes:
"Having tested your eggs we find only one clear . . . we got 33 chicks out of 36 eggs."

L. C. L., Ashstead, writes:
"I am very pleased with the 1924 pullets I got from you."

Mrs. ATHOL STUART, M.S.P.B.A.,

OAKLANDS, BOXMOOR, HERTS.

Specialist Breeder of Trapnested and Blood-tested

Rhode Island Reds and White Leghorns.

HATCHING EGGS, 7/6, 15/- and 21/- per dozen.

(SEE MY BLOOD-TESTED REGISTERED PEN.)

EXAMINE MY FOOD PRICES.
SEE "EGGS," DECEMBER 9th.
SLEEP AT NIGHT,
KNOWING YOUR CHICKS ARE RIGHT.
FEED THEM ON

Young's "Delecta" Chick Feed

PUREST AND BEST—HENCE CHEAPEST.
THE BEST BONE AND MUSCLE BUILDER.
SEND FOR SAMPLE — JUDGE YOURSELF.

No. 1, 18/6 No. 2, 18/-

Per Cwt., F.O.R. HORLEY.

Prices quoted Carriage Paid. Ton lots at substantial reduction. Nothing but Finest Groats, Cut Wheat, Maize Grits or Cooked Flaked Maize. Obtainable only from—

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Satisfaction Guaranteed. Unsolicited Testimonials Sent.

Early Hatched COCKERELS

in our five varieties.

From Individually Recorded Hens.

R.I.R. *W.W.*
W.L. *B.L.*
L.S.

The "Heydown" strains are the SAFETY STRAINS by reason of the fact that they are the result of many years continuous trap-nesting of 2,000 pullets and hens. In addition to this, all breeding stock at "Heydown" has been tested by qualified bacteriologists, and shown negative results for B.W.D.

JOHN H. DOWDEN & SON,
"Heydown," Heathfield, Sussex.

The 'Eclipse' Poultry Houses

Manufactured by a PRACTICAL POULTRY FARMER.

A No. II.
(60 ft. x 12 ft.)
Supplied to
Capt. J. C. Sutton,
Parklands,
Mayes Green,
Ockley, Surrey.

SATISFACTORY VENTILATION IS PROVED BY RESULTS, NOT BY THEORY ONLY.

Our own experience over a period of nearly 10 years with "Eclipse" Houses has been absolute immunity from colds, roup, or kindred ailments amongst the stock so housed.

This we believe would also be the testimony of all our customers. With these houses FLOOR VENTILATION is not necessary, but is provided for and obtained when desired by the simple adjustment of window buttons.

Fullest enquiries and inspection invited.

HERBERT W. MARTIN, PERIVALE POULTRY FARM & APPLIANCE WORKS,
EAST HARLING, — NORFOLK.

EGGS

THE OFFICIAL ORGAN OF THE
Scientific Poultry Breeders' Association

WEDNESDAY, DECEMBER 30th, 1925.

Editorial.

REEDING FOR PRODUCTION—(Continued).

Now I am coming to a sore point. This question f egg size. One of our biggest distributors reently stated that there had been a marked ecline in the size of the British egg in recent ears. I forget the actual decrease, but it was ery marked. We compare very unfavourably in is respect with the imported egg, and it is enerally assumed that the foreigner sends us his est and consumes the smaller ones at home. hat is not correct. He does not produce the umber of small eggs we do here. The reason r this is that the average production of the anish, Dutch or French hen is considerably lower ian our bred-to-lay stock. I have already menoned the effect of precocity on the size of egg, nd in my view this is the chief cause of the ouble, but it is not the only cause. With some eeds the small egg is inherited. The Wyanotte is an example. You are aware that the ebright Bantam, the Hamburgh, and the Light ahma all enter into the composition of the yandottes. From the Hamburgh it inherits its olificacy, and from the same breed and the ntam, the small eggs.

The idea is very commonly held that by selectg only the large eggs for incubation you will prove size of eggs; that is a very mistaken ea. The size of egg from which a chick is tched is no indication of the size of egg which will lay. The selection of hens for egg size is comparatively easy matter. If you trapnest, no n should be included which did not lay two ounce gs after she had been laying three months. I uld go further and say, after ten weeks, and average weight of her eggs for the full year ould be at least 2⅛ ozs. Your greatest difficulty l be with the male bird. The advice so freely en that, in order to improve size of egg, you ould mate to the son of a large-egg dam, is to ne extent sound, but only to a limited extent. is not only necessary that you should have the n's record of egg size, but of the sire's dam a generation back on either side. Even then mating is likely to prove disappointing, for all egg is dominant to large, and quite 60 per t. of the pullets from such a mating are likely to inherit the small egg from the dam rather than the large egg of the sire. You can only attain your object by the most careful mating, and persistent selection. In the choice of the male the greatest care must be displayed. The introduction of a male from a small-egg dam to a pen of hens carefully selected for size of egg would wreck all your chances of success.

Now as to systems of breeding. To be perfectly frank, I cannot recommend any system. Line-breeding I have already mentioned. It may be successful with other stock. Our exhibition breeders practice it successfully, but they are not breeding for production, and have not to contend with the effects of production.

The real basis of all success is the selection of the individual. There is the group or family system, and the various charts drawn up by those who are mathematically inclined. What is the use of your chart if the distant cousin you should mate, according to it, to your best hen is undersized or has a crooked breast bone? You would be far safer in mating her to her brother or son if they were better birds.

You cannot say how closely you can breed unless you study the individual, but it is the individual that counts. You must not rely on a paper pedigree, i.e., a trapnest record. He must possess the characteristics of the layer, the size, and the constitutional vigour.

Then I say, success depends entirely on selection. Never forget, 'tis the individual that counts. Be sure he is "pure" for the factors which made for high egg production, which have already been enumerated, and that is the only system I can recommend.

Now, may I deal with the subject which I put to you as a proposition and not as a fact? It is:—

> That high fecundity is not inherited; that a hen only transmits the constitution which permits the full expression of the racial character fecundity, and that this probably depends upon the composition of the blood.

If you mate a highly fecund dam to a low fecund male there will be very wide variation in the production of the progeny. A few will give records almost as good as their dam, and you will get them grading down to as low as their sire's dam, and you do find, although I do not wish to insist on this point, that the lowest and the highest will be about the same percentage of the flock. My point is, then, that the female transmits the racial character fecundity in an equal degree to all her progeny, but they cannot all inherit her constitution, and it will depend on the degree in which they inherit the constitution of the dam or sire, as to whether they are high, medium, or low producers.

We may get the few who will inherit 90 per cent. of the constitution of the dam. In that event they will be high producers. We may also get the few which will inherit 90 per cent. of the constitution of the sire, and they will be poor producers, because his constitution inhibits the full expression of the racial character. You will note the difference in the external characteristics of the high and low producer, and you will note, too, that these characters are apparent before egg production begins. Mr. Hadlington, the New South Wales Government expert, made the following matings :—

A. Leghorn cockerel to six Leghorn hens and six Game hens.

B. Game cockerel to six Leghorn hens and six Game hens.

The Leghorn cockerel was the son of a 293-egg hen.

Unfortunately we have only flock and not trap-nest records, which would have been more helpful. The progeny of the

Leghorn-Game cross averaged 112 eggs per hen.
Game-Leghorn cross averaged 117 eggs per hen.
Pure Leghorns averaged 193 eggs per hen.
Pure Game averaged 51 eggs per hen.

What are we to gather from these records? Are we to conclude that the sire was unable to transmit his dam's fecundity to the progeny of the Game hens, but was able to do in the case of the Leghorns because the genetical constitution differed? I suggest that all the dam transmitted was the racial character, fecundity. The Leghorn cross have better results than the pure Game, because they partook of the physical constitution of the Leghorn male, which enabled them to give fuller expression to a character which they had inherited from their dam's. In the case of the Game-Leghorn cross, what occurred was that the female progeny was unable to give full expression to the character fecundity, because it was **inhibited** by the constitution of the male, which they shared with that of the Leghorn dams.

It has never been suggested that a poor layer has a less perfect ovary or oviduct than a good one.

If we observe a moulting hen we note that the secondary sexual organs (the comb and wattles) shrivel as the ovary becomes inactive, and the feathers begin to drop. This is due, not to the dropping of the old feather, but to the development of the new, which pushes out the old, and the nourishment required for the new feather is diverted so that the fowl ceases to lay, and only resumes when the new feather is fully developed. Hens with great wealth of feather are almost invariably poor layers, so that one may a
whether correctly or incorrectly remains t
seen, that if a hen is constitutionally in
towards great wealth of feather, or for that m
to excessive fat, she is inhibited from givin
fullest expression to the racial character.

(Continued at Foot of Next Column).

We have heard a great deal as to "mode
heritance" respecting egg production, a
appears a very complex problem on whic
scientists are unable to agree, but can w
away from the fact that every hen is hatche
the same number of ovulas or potential eggs
that I cannot understand what is meant b
term "mode of inheritance" in this conne
but then you see we are all very simple at t

Modern Poultry Feeding.

By TOM NEWMAN.

MAIZE AND OTHER THINGS.

I have received the following letter from Ca
Keith Douglas :—

> " Re Mr. G. H. Palmer's letter in your is
> of December 2nd. It may, as evidence
> the other side, interest readers to know t
> maize is fed on this farm to all birds as
> grain feed, excepting pullets up to about
> months. About half a dozen handfulls
> wheat are thrown into the litter about 10 a
> (to each 50 birds) as an exercise feed. I
> not entirely convinced that this is necess
> Except for this the only grain feed is at n
> —kibbled maize. This is fed in troughs
> the pullets and thrown in litter to old h
> Of four pens of January and February
> Red pullets, 200 birds—50 per pen—each
> has laid over 70 per cent., having laid s
> July. They are now slacking off a bit and
> ing round about 40 per cent. Only a
> seven pullets out of the 200 have shown
> signs of partial moult, food box capacity
> also more than doubled this year. Dry ma
> your formula always before them.
> pullets have been broody—one five days,
> three. All birds are intensively kept in s
> roof house, 16 x 25 per 100 bird capa
> Top 3 ft. of part of house always open al
> year round. The nest boxes come under
> then there is another opening, 4 inches
> running the whole length of the house, w
> enables the birds to reach the drinking v
> which runs outside the house in gutte
> supplied from main.
>
> The house is furnished with a 3 ft.
> glass hood to stop driving rain, but not

out light; there is ridge ventilation the whole length.

I give details of house to show the conditions under which these birds are that are heavily fed on maize.

The only breeds kept are R.I.R. and W.W. The Leghorn was given a fair trial—50 Leghorns against 55 W.W. At the end of the year the average returns per bird for eggs was 6¾d. more in favour of the Wyandottes; there was a loss of 10d. per cockerel on the Leghorns raised, and a profit of 4s. 6d. on the W. Wyandotte cockerels. At the end of the 2nd year, when the hens were sold as W.W. hens, averaged 2/3 more per bird.

The first year the food was weighed in, and the difference in consumption was not noticeable, as a hen will lay up to 22 lbs. and more weight of eggs. The amount extra it eats to keep up an extra 1½ lbs. of body weight over another breed is not an important factor.

I am afraid I must ask your pardon for getting so far from the original subject, but I have wanted to get this off my chest for some time."

Mr. Palmer may, of course, say that maize only chieves immediate results, but I feel sure he will gree that this is a matter of observation. There re some individuals in every flock who would have his tendency to put on internal fat, and to them t would be unwise to feed maize liberally. Again, hen heavy breed pullets come through the moult here is a tendency to put on fat before they once ome into production. At such a time it would e unwise to feed maize ad. lib., but when they nce start laying again maize can be fed with good esults. Of course, one would not feed it so freely o old hens as to pullets.

I see the old controversy has broken out again s to whether artificial light is forcing or not. fter all, it is really a question of feeding, the lea being that the birds need an extra feed for roduction during the short winter days.

Some American experiments have shown that irds which are fed under light prove but poor reeders, and this would tend to indicate that the eding by artificial light was forcing.

There, however, is the question of our going to xtremes which we generally do, and I should like o see tests carried out in this direction. It is erfectly certain that if the birds are fed under rtificial light for any length of time (by that I eans a couple of hours each night) that it does mount to what is called "forcing."

I think it would be a totally different matter if ey were to just get the small feed which would ake the difference between a sufficiency in a long ay, and an insufficiency during the short days d long nights.

The Poultry Housing Factor and Winter Egg Production.

By **PROF. WILLARD C. THOMPSON,**

Director of the National Institute of Poultry Husbandry, Newport, Salop, England.

Continued from Page 420.

The first feature is, I venture to say, SUFFICIENT LIGHT. It is important that the poultry laying house should have sufficient light to give the fowls contained therein during the all-too-short working days of the winter season the longest possible duration of working light. In another way, sufficient sunlight admitted to the laying house during winter days is wonderfully tonic in its effects upon the health of the fowls. Perhaps it is the violet or curative ray at work. Perhaps it is the cheering warmth of the sun's rays, and their tendency to keep the litter dry and comfortable, as well as more sanitary. At any rate, the winter laying house should be well lighted. The floor area, where the hens actually work, is the part that should have few dark spots on it. I like to use a type of construction that will have a sufficiently high frontage to allow of ample window space in that wall which we preferably face towards the south, from whence we are to secure longest possible duration of sunlight. I like, further, to place some windows in the rear wall near the floor, so that the floor area is practically equally lighted. It helps much in inducing the fowls to keep the litter evenly distributed, and tends to force them to make use of the whole floor area. This means that we might possibly arrive at more or less of a rule. Mine is to allow approximately 5½ square feet of window space in the front wall for each 5 square feet of floor area, and about one-seventh as much window space in the rear wall as we have in the front wall. In the National Poultry Institute 20 ft. depth Multiple Unit Laying House, plans for which are before you to-day, this rule is very closely applied. I am finding that the house which we have erected after this plan is ideally lighted.

Next after sufficient light, I am tempted to put EFFICIENT VENTILATION, and in the same breath to indicate that it is equally as important a factor to the health of the layers. Hens require a relatively enormous amount of fresh air. The expiring breath of the hen is extremely moisture laden, as her respiratory apparatus performs the functions of the sweat glands, which the hen has not, and some of the functions of the urinary system, in giving off poisonous by-products, in form of moisture through the expiring breath. Unventilated, the hen house will soon become damp and moisture-laden. Proper ventilation cares for many damp poultry houses. Proper ventilation furnishes the hens, fairly closely housed as they are, with sufficient fresh air. This must be done without creating draughts. I feel that it is vitally important that the floor area on which the fowls must spend their working days, as well as the perching departments, should be free from chill draughts, and yet in many a winter poultry house I have seen sufficient breeze blowing across the floor area to move feathers and bits of straw about. It is most important to cut out all possibilities of floor draughts. Let in the fresh air, but have it under control. I like some open front in the laying house, preferably near the top, and I like an air out-take in the peak of the ridge of the house, so that the movement of air within the house is most vigorous up above the fowls themselves, and thereby gently changes the air beneath. In the Multiple Unit laying house before you ventilation is taken care of by means of openable window panes, a narrow wired intake above the glass windows in the front wall, and by the adjustable ventilator, home-made, which is over the central partition between the two pens in this particular house. Such a ventilator is needed only about every forty feet in a long house.

And then ROOMINESS. Time is fleeting, and I must hurry on. In the average winter laying house, built for intensive, closed-in sort of management, I like to allow approximately four square feet of floor space for each laying fowl contained therein. In case of Leghorns and the lighter, smaller, more active types of fowls, slightly less need be allowed per bird, and in case of heavier types this figures holds as it is given.

Closely related to this last factor is SIZE OF FLOCK. I am convinced that the smaller flock wins out every time in actual percentage of egg production which can be induced from them, but there is an economic limit beyond which it is impractical for the average poultry-keeper to go in dividing up his layers into small flocks, and in the larger flocks, up to a certain point at least, there is as much profit to be realised, when labour and other items are considered, even though actual numbers of eggs may not be quite so high. Personally, I feel that one hundred layers is a convenient and economical unit for the poultryman to use. It is large enough to allow of economical handling as to housing and labour, and it is small enough to get some of the advantages of the smaller unit and to escape some of the dangers of the very large flock units. In this house, a pen 20 ft. x 20 ft., four hundred square feet of floor area is intended for one hundred hens. It works. I have tried this size and type for fifteen years, and seen it tried on hundreds of poultry plants. And if a house works for many, it may indeed work efficiently for us.

CONVENIENT AND EFFICIENT ARRANGEMENT OF INTERIOR must never be lost sight of in planning a good laying house, and further, we must not forget that two parties are concerned—the hens and the man. From the hen's viewpoint, which is most important, the interior should be so arranged as to have all fixtures, as nests, etc., up off the floor, and the entire floor area left for working space for the hens. The hens wan plenty of nest room, one nest for every four o live hens, and nests large enough to allow hen free access and turning room, for this prevent much breakage. The average hen needs a nes about fourteen inches square. The nests shoul be in a quiet, more or less secluded place, as alon sidewalls, or under the droppings boards, as i this plan. The water supply and the food hopper should be on raised platforms, thus making ever inch of floor space available, and the fixtures mor convenient to the man. From the man's view point, head room is important, and yet he mus yield sufficiently on this point to keep costs down I like the two-thirds span roof because it allow plenty of head room while providing a house styl otherwise quite suitable to the hens. If the heigh of the rear wall be something like five feet, an that of the front wall about seven feet six, bot hen and man should come near being satisfied.

Lastly, the well-arranged laying house must b SANITARY, as it must constantly protect th health of the fowls in it. This falls essentially int two parts. Suitable provision must be made fo the collection of the manure given off while fowl are on the perches at night. The droppings boar system is most sanitary, and in the end labou saving, while at the same time not taking an of the floor space, permitting low back wall win dows, and providing a means whereby valuabl poultry manure may be gathered without much, i any, contaminating litter, and properly stored fo later use on the soil, where it proves a worth o something like four to five pounds per ton. W should conserve it carefully. I like best to locat the perches and droppings boards on the rea wall, back as far as possible from the front of th house, as night comes on and the fowls becom inactive and still. Keep the perches at least fiftee inches away from the rear wall, and allow at leas twelve inches between perches, and figure on length of perch sufficient to allow about ten inche for each fowl Perches arranged along the rea wall provide a uniform night environment for al fowls, and this is an advantage. In the secon place, sanitation deals with the litter problem The winter laying house should be bedded dow with ten to twelve inches of straw, and the hen will work and scratch diligently in it, and find i it a suitable and comfortable environment. Fo nests I like wood shavings, dry, clean, an absorptive. Chopped straw will do, but keep clean and dry, whatever is used.

Those are a few of the important features tha seem to me should be found in any modern an efficient laying house. They do not entail ex pense, but they can all be incorporated in th simplest sort of design, as has been done in th 20 ft. Multiple Unit house. Keep the unit as nea square as you can, and you will keep the cost c housing per fowl down to a minimum. Squar buildings are always economical in the enclosin of space.

The properly-built laying house is worthy of preservation, and it is a matter of economy to do so always. We are using creosote or brown solignum as an exterior paint at the Institute, and white distemper for the inside. The latter might seem an extravagance at first thought, but we find it is far from that. It so brightens the interior as to be worth doing for that advantage alone. It preserves the timbers and need only be redone after several years.

I must apologise for the length of my paper, but the subject is a big one, and I find difficulty in knowing just where to cut and where to stop.

Success in poultry-keeping is made up of the working together of many little details, no one alone standing out as sufficient unto itself. It is like the man who sought his doctor, saying that he felt washed out and weak. His doctor told him to take a pill and a teaspoonful of whisky after each meal, and report back in six months. At the end of that time he went back and reported no improvement. The doctor asked if he had taken the pill and the whisky? He said that he had. "And in the manner prescribed?" continued the physician, probably suspecting the real situation. "Well, said" the man, "I must confess that I may be a couple of weeks behind on the pills, doc', but I'm six months ahead on the whisky." We poultry raisers must not get six months ahead on the whisky, either literally or figuratively, for we must give each contributing factor to successful poultry production its proper place in the prescription.

MEMBERSHIP OF THE S.P.B A.

So many of our readers are under the impression that they must necessarily be scientists, pedigree breeders, of farmers on a large scale to render themselves eligible for membership of the S.P.B.A This idea is quite incorrect. The S.P.B.A. is out to assist all grades of poultry-keepers, from the proprietor of the 10,000-hen farm to the intensivist with his dozen or so birds; all are entitled to equal benefits. The Five Shilling subscription brings with it many advantages, namely: Free Advice by Post, a Copy of the Annual Register, the Benefits of the Discount System, and many other advantages too numerous to mention here. You should write for full particulars to the Secretary, TOM NEWMAN. The Beeches, Rudgwick, Horsham, Sussex. The financial year began on 1st September.

Members who desire to have their copies of "Eggs" bound into volumes, but who wish the advertisements omitted, can have this done by instructing their Bookbinder to this effect, and he will see that these pages are not included.

Answers to Queries.

By the EDITOR.

DUCKS.

Rev. Seymour Shaw, Warcop Vicarage, Westmoreland, will answers all queries relating to Ducks. In cases of extreme urgency answer would be direct, otherwise they will appear in these columns.

POST-MORTEMS.

"BODIES" for post-mortem examination should be sent to **Major C. G. Saunders, D.S.O., B.V.Sc., M.R.C.V.S., Tarring Road, West Worthing.**

Bodies should be packed and sent by post immediately after death, marked for immediate delivery. The fee is 5s. for a reply by post. The name and address of the sender should be distinctly marked on the package. Advice of dispatch and fee should be sent under separate cover to Major Saunders.

Readers are particularly desired to observe the above rules when sending birds for post-mortem examination and also as to writing their name and address distinctly on the package.

REPLIES BY POST.

Replies by post (Not Post-Mortems) can only be sent to non-members of the S.P.B.A. on payment of a fee of 2s. 6d. per letter. These are answered by the Editor, and relate to every phase of poultry-keeping except post-mortem examinations. Members of the S.P.B.A. are entitled to a reply by post by the Editor by virtue of their membership (NOT from Major Saunders).

ALL questions should be addressed to the Editor. Major Saunders does not reply to questions either by post or through these columns, except in relation to Post-Mortem Examinations.

"Anxious" (Bath). The sample of mash sent seems to be entirely satisfactory, and I am at a loss to understand why your birds refuse to eat it. I note you say you are feeding on whole maize. This is a mistake. It would be much better were you to give it kibbled. Possibly you are feeding too much grain. As your birds have free range, it is also possible they would not eat so much mash. If they are in good health and production, and producing fairly well, I should not worry about the matter. However, if you want a good formula, try the following:—2lbs. bran, 4lbs. middlings. 1lb. Sussex ground oats, 1lb. maize meal, and 1lb. fish meal. Grain feed with this should be kibbled maize or equal parts kibbled maize and wheat.

"Beginner" (Crawley Down) writes as to whether he is getting a fair return from 270 birds, of which 82 are pullets, and the rest supposed to be second-year hens. When he took over a month ago the egg yield was 50 to 60 per day, and in a fortnight dropped to 24 and 25. They were then getting a mash in the morning made up of:—Meat meal, middlings, biscuit meal, Sussex ground oats, pea meal, and a grain feed at 11 o'clock and 3.30. When the egg yield dropped he decided to change the feed. He now gives mash in the evening of meat meal 4lbs., middlings 12lbs., ground oats 8lbs., alfalfa meal 5lbs., with some boiled greens A grain feed at 7.30, 10.30, and 1.30 p.m. Now he is giving 30lbs. of mash and 50lbs. of grain to the 270 head of stock per day. At mid-day they get greens tied up, to peck at. He sends two samples of Sussex ground oats and one of limestone grit, and he is giving oyster shell as well. It is quite obvious that my correspondent has adopted the correct nom-de-plume. His feeding is wasteful in the extreme. Presumably most of the grain is not eaten, as approximately it means three ounces per bird, while, in addition to this, the birds are getting 1½ozs. of mash. He will be wiser if he changes his feeding altogether. The addition of boiled greens with alfalfa meal is unnecessary. If he has sufficient greens there is no need to feed alfalfa meal, which is expensive. I would suggest he tries the following mash: 1lb. bran, 1lb. alfalfa meal, 4lbs. middlings, 1lb. Sussex ground oats, 1lb. maize meal, and 1lb. fish meal. Give the birds 2ozs. of this per head, weighed when dry. A small scratch feed given directly they come from the perch in the morning, say one handful between every five birds, and a good 2ozs. of grain per bird as the last feed at night, preferably equal parts kibbled maize and wheat. There is no need to use limestone grit and oyster shell. The sample of limestone grit he sends is a good one, and not too large. If he has sufficient green stuff—that is to say, cabbage, he could let this replace the alfalfa meal. Sussex grounds oats at 15s. are far better than those at 13s. 6d., which are inferior.

"Alfalfa" (Burnley) sends me samples of Sussex ground oats at 15s per cwt. He says the traveller from his corn mill told him the other day that such a process as grinding oats through stones is out of date, and that the millers have "chucked their stones into the ditch," and are now using up-to-date machinery. It would not pay them to use obsolete things now. My correspondent asks if this is so. and goes on to ask: "Are Sussex ground oats, up in the North especially, merely a name that means nothing?" The sample he sends is not Sussex ground oats, but is good value for the money, and would answer the same purpose. The traveller is entirely mistaken in saying that the millers have "chucked their stones in the ditch," and are using more up-to-date machinery. The Sussex ground oat is still ground in the old-fashioned way in most of the mills in Sussex, and the samples we are sending out are ground by what are known as "peak stones." I cannot understand why ground oats milled in the North should be called "Sussex" ground oats. They certainly should be sold more cheaply, as with the newer machinery they should be ground far more quickly. although not so finely; they are simply a ground oat, and not "Sussex" ground. The sample of fish meal sent at 23s. 6d. is a good one, and the alfalfa meal is first class. It is generally dusty like this when there is so much leaf in it. The sample of white thirds, or bran, which he sends is a good one, but is certainly not better than good thirds or middlings. The oatmeal flour is very good and excellent value at 14s. 6d. per cwt. I should prefer it to the ground oats which he submits. The thirds are just moderate My correspondent goes on to make further remarks as to dropping boards; whether they are necessary or not. In my opinion no house is complete without them, especially in damp and wet weather. such as we so often experience, and I certainly should never advocate manure pits in any house

POST-MORTEMS.

O B—The post-mortem examination of the cock and cockerel revealed identical conditions, viz., extreme emanciation and an oedematous condition of the wattles. In the case of the cockerel the interior of the wattle was becoming necrotic. In my opinion there are two distinct conditions present, viz.:—(i.) Asthenia, or going light, as it is sometimes called. (ii.) A local infection of the wattles, contracted through small wounds or abrasions, etc. Asthenia is due to bacterial infection of the intestines, causing a muco-enteritis, which seriously interferes with the digestive processes, and hence is accompanied by wasting. Although not very actively contagious, it is advisable to isolate birds that are found to be losing weight, as the causative organisms are passed out with the excreta. Give such birds a dose of castor oil to clear the intestines, and then add 15 grains of sulpho carbolate of zinc to each gallon of their drinking water for a month; feed generously. mixing cod liver oil with the mash. The swollen wattles should be boldly and deeply opened up with the knife, the contents of the swelling pressed out, and the wounds freely painted with tincture of iodine.

H. K H.-D.—The post-mortem examination of the White Leghorn hen showed that the swelling was of an oedematous nature, the condition extending down the neck and over the breast, although in a less degree than that around the head and throat The internal organs showed a febrile condition, but the pallor resulting from the bleeding from the dislocated neck made it difficult to judge the extent of this. I have frequently found an identical condition in birds suffering from roup; in many advanced cases the subcutaneous tissues were in a caseous condition It is true that there were no discoverable roup lesions to be found in this bird, but it would not surprise me if upon examination of the remainder of the incontacts, that that disease was found to be present. This condition is not described in any of the authoritative text books on poultry diseases; it is not the same as oedema of the wattles and head ornaments, which is caused by a local infection by the fowl cholera germs, and I have never before come across it where visible roup lesions, either catarrhal. pox, or diphtheritic, were not to be found. I should be most interested to learn the result of an examination of the rest of the flock.

Correspondence.

THE INDUCTION OF VENTILATION AS APPLIED TO BROODER HOUSES.

To the Editor of "Eggs."

Sir,—The following voluntary communication has been sent to me by a member of the S. (stands for "scientific" please, Mr. Editor) P.B.A., and I think may be of interest to some readers.

As I have had but little experience of brooder houses I am unable to give the information many are writing me for, and would be glad of the opportunity to quote the remarks of an authority.

I will give the letter, word for word, where it concerns the above subject:—

APEX AS A BROODER HOUSE.

It has now been in use for three weeks. During this time we have experienced several gales and the extreme cold weather. There has been no sign at all of Carter's Contention. In fact, it has been proved in the following manner:—

A stove is used to heat the compartments for the first few days after the chicks are let out for the first time.

Although there is practically no perceptible movement of air during any kind of outside conditions, it is impossible to alter the temperature even a few degrees in the lower part of the house. The warmed air is always ascending. During the same outside conditions it is quite easy with the same size stove to heat up a corresponding floor space area in a Lancashire Cabin type of Brooder House.

Although the house does not feel unpleasantly cold when the temperature is freezing inside and out, it is necessary to bring the temperature up by artificial means to make it a really satisfactory Brooder House. I should suggest being able to close the vent partially for this purpose. The house is very accessible."

Needless to say, I was very gratified to hear that that inductive system of ventilation had been extended in such a direction, as the application to Brooder Houses was quite outside my contemplation, and I consider it a most useful addition to my recent article on the subject.

The necessity for reducing the vent simply means that the heat from the brooding apparatus causes such a rapid ascension of a comparatively large volume of heated air that too much air of a very low temperature is automatically pulled in. As suggested, the obvious remedy would be to check the outflow, this would automatically check the inflow, and so conserve the heat in the house. A very simple matter to arrange.

In reply to Mr. Carter's further communication in your issue of the 9th inst.

With all the goodwill in the world, criticism of any new process should be invited and accepted, but would it not be better that Mr. Carter, and those holding similar convictions, should, instead of saying the system will not work, or does not work, rather ask **why** it works?

In the present case of the induction system of ventilation they should recognise that it is an **accomplished fact.** It is not a theory of a chimera. It is established. No amount of theory as to why it will not work is of any good. The thing is there, whether in an apex, span-roof, or any other shape of house, and functioning at the present moment for many thousands of birds.

There is little in his letter to comment upon that could be of much use or interest to the readers of "Eggs," but there are one or two points on which his remarks may be a little misleading.

(1) Nobody would feel greater regret than I should I have been guilty of promulgating false doctrine. That I have been guilty of enthusiasm is perfectly true; my experience of the house and system is my only excuse.

(2) Personally I cannot but regard Mr. Carter's theory and reactions shown in his explanatory diagram as untenable. If he re-examines it he may see that it would tend to achieve the impossible. Anyway, the internal design of the house is such as to render anything of the kind extremely unlikely, if not impossible. Still less is it likely, as one of the features of the particular form of vent is that successful ventilation is absolutely independent of the direction of any wind.

(3) He says, "Air is subject to compression, and even if the house were quite tight except for the ridge opening the force B. would enter."

If this were so he would have us believe it possible to blow air into the neck of a bottle.

(4) If my "high explosives" have done anything towards blowing up some of the stagnant obsoleteism, which in the matter of apparatus so hampers poultry practice to-day, they will have served a useful purpose.

The word "ports," which he objects to, is used advisedly from both a dictionary and a technical point of view as defining exactly what they are—i.e., gate or entry. "A few holes bored in the sides" might be for any purpose, rats and mice for instance; it would be unsuitable in the particular design to use them for air inlets.

(5) In my own practice the houses have stood the severest tests in the form of 70 mile an hour Atlantic gales, rain, squalls and blizzards, but have not yet been subjected to a wind force of 200 miles per hour; that sounds rather a lot.

The cheapness of the Apex House is not imaginary, as Mr. Carter suggests. It is very real.

Mr. Hemelryk and Mr. Price have done better with their respective excellent productions at somewhere about 2/- per bird, as against 2/3 to 2/6. But our aims are all in the same direction, i.e., to educe the cost and increase the efficiency of ousing; this is good for both the poor and the nexperienced.

Yours faithfully,

C. WINTHROPE SOMERVILLE.

SIXTH MIDLAND POULTRY FESTIVAL.

(An Appeal for Entries in the Championship Layers' Class for Hens that have competed in any Official Laying Test.)

Sir,—Breeders who are interested in these layers' classes are earnestly urged to give their support at the above-mentioned festival.

It is, of course, too late to put on extra classes for the different breeds, but if breeders would unite in giving their support, by sending entries for this championship layers' class, I am sure it will be a complete success, as well as of great educational value. Any small specials would, I am certain, be most welcome, for the different breeds the breeders are interested in. (I will give a special for the best White Leghorn.)

Is it not time a move was made for all societies, breeders, and judges to unite for the purpose of drawing up a general utility standard for the utility bird when shown in public competition. I think I am right in saying that the utility bird is now shown on chance, as we have the three different kinds of judges, viz., the utility judge, the exhibition judge, and the exhibition utility judge. So without a recognised standard it is impossible to say what these different judges actually want, some of their awards being as confusing as it is possible to be. Why this wide diversity of ideas?

We are given to believe that since the advent of the utility show, egg production, also the size of egg, has greatly improved. Now look through the laying tests reports and see if this is correct? I think you will find we are drifting backwards. Also the small egg, instead of being eliminated as it is claimed by a number of breeders and advocates of the utility show bird, is much more in evidence since fancy blood was introduced into their laying strains. For proof again look up the laying tests reports.

I would again suggest that all interested in the drawing up of a general utility show standard should, without any delay, unite for this purpose. I am sure a quick movement in this direction at the present moment would entirely stimulate that which all breeders, who are aiming to fix productive character in their flocks, based on stamina at the highest level, have in mind.

If approached, I am sure Mr. A. H. Brain, Hon. Organising Director of the Sixth Midland Poultry Festival, would arrange a meeting for the first inaugural discussion on this subject on one of the dates of the festival.

So one and all who have the welfare of the layer conforming to its breed characteristics at heart, kindly help to make this championship layers' class a complete success by giving it your full support.

E. J. STONE.

WADHURST BRANCH, S.P.B.A.

On December 11th a table show of eggs, dead poultry and live rabbits was held at the Hut, Hill House (by kind permission of Mrs. Boyd).

The eggs and poultry were judged by Miss Amey, and the rabbits by Mr. H G. Billinghurst, F.L.S.

Eleven plates of eggs were entered, and, in accordance with the new rule of this branch, the breed, and whether from hens or pullets, was disclosed.

This had the effect of adding interest to the exhibits, and revealed the fact that in this district the size of pullets eggs left nothing to be desired. The exhibits appeared to justify the high standard (2⅛ oz.) set for first grade eggs in the light breed classes at the Branch s Laying Trial.

The entry of rabbits was small, but as this was the first time that this class of stock has been shown at the branch, was encouraging. The quality of the exhibits both Blue Beverens and Chinchillas, was excellent. Some of the rabbits had already secured valuable trophies at other shows, so that the branch should become an important centre for Fur Fanciers.

List of Prize-winners.—Brown Eggs: 1st, Br. Everard (p); 2nd, Mrs. Fazan (p); 3rd, Mr. A. E. Gallup (p). White: 1st, Messrs. Luff and Bennett (h); 2nd, Br. Everard (p); 3rd, Mrs. Tudor (p). Tinted: 1st, Br. Everard (h); 2nd, Br. Everard (p); 3rd, Messrs. Luff and Bennett (p).

(h) Hens' eggs. (p) Pullets' eggs.

Table Poultry Section: 1st, Miss Previte (Light Sussex).

Rabbits.—Blue Beverens: 1st and 2nd, Miss Moutray Read; 3rd, Mrs. Tudor. Chinchillas: 1st, Miss Wigan; 2nd, Mrs. Fazan; 3rd, Miss Wigan.

After the judging a lecture was delivered by Mr. Billinghurst, on "Which came first, the hen or the egg?" The lecturer illustrated his remarks with numerous lantern slides, showing the development of the germ cells from the lowest protozoa to man. He compared the different classes of the animal world, and explained how the various cells had to undergo the same phases of evolution.

The meeting closed with votes of thanks to the lecturer and the judges, to Mrs. Boyd for so kindly lending the room, and to Mr. S. T. Wallis for the use of the lantern.

The next meeting will be held on January 16th, when a lecture will be given on "Skin, Scales, Fur and Feathers," by Dr. Rushton, of St. Thomas' Hospital.

TO THE READERS OF "EGGS."

As President, I would like to draw our readers' attention to the fact that our Secretary, Mr. Newman, has just completed a tour—Scotland and Lancashire—delivering lectures on Poultry-keeping at various centres.

These lectures, as on all other similar occasions, have been given from a purely voluntary basis, and entirely without personal recompense. It would appear necessary for mention to be made of this fact, since rumour has it that the contrary was the case.

Mr. Newman hopes to lecture at Birmingham on January 7th, where a Poultry Show is being held, and our Society will be represented.

EFFIE G. HUNTER,
President, S.P.B.A.

Petit Poussin.

This particular class of bird is one that can b
made very remunerative to the producer who wi
take the trouble to thoroughly understand it fron
the market point of view, taking into considera
tion at the same time his own breeding arrange
ments for the following season.

The Market facts are as follows:—

It must be understood that on the Londo
Market, Petit Poussin is only saleable if sent kille
and clean plucked. The small cockerels sent aliv
are practically unsaleable, except at a few penc
each. It is better always to prepare poussin o
the farm, because the fact of them being harasse
by a railway journey causes them to kill and pluc
out a very bad colour, and appearance goes a lon
way towards selling poussin.

The writer would point out the fact that blac
feathered birds do not look anything like
attractive as the white-feathered varieties.

The genuine demand for Petit Poussin commence
about the end of February, for the tiny chicke
weighing 10 ounces when killed and clean plucke
and as the weeks follow the demand slowly chang
for poussin of a larger size, until it reaches May
June, when nothing is wanted under 1½ lbs.

It will be seen from this that the producer w
have to start hatching very early, and the que
tion as to whether it is profitable for the produc
to hatch for this specific object is one for his ov
discretion.

The actual TIME of marketing poussin mu
also be at the discretion of the particular produc
in conjunction with the state of the market, b
cause one who is rearing for stock cockerels c
only market his surplus when they have reach
the age at which he can decide which he intends
keep, and which he intends to market.

The real petit poussin is a bird which should
milk fed in order that it may be plump and so
When it is ready for marketing, it should
killed and **absolutely CLEAN PLUCKED.** Th
should be very carefully cooled, and graded
sizes.

After this they should be packed in boxes, ea
containing a dozen birds. The actual pack
material to use is Green Reeds, because with th
one can make a very attractive consignment, p
viding the birds are properly prepared.

If the producer is unable to obtain Green Ree
or even fern or cabbage leaves, he should
grease-proof paper.

As a word of warning, the writer would ment
that poussin with full crops are invariably c
demned as being unsaleable.

The producer must keep in close touch with
market for this particular trade, because a p
ticular size poussin which is wanted this week r

(Continued at Foot of Previous Column).

not be wanted next week, and a bird of this size cannot be kept for any length of time when prepared, and even if it is put into cold store it is surprising how rapidly it deteriorates both in appearance and condition.

OUR LATEST SUCCESS.

A REVIEW OF THE 1926 S.P.B.A. REGISTER.

By FRED W. WAIT.

In response to a request to review the Eleventh Annual gister, I am tempted to cast my thoughts back to the days ien I first joined the Society, a few weeks after its formation d when its members numbered less than fifty.

To-day we can, without any fear of egotism, claim that the P.B.A., numerically, financially and educationally, is second none in the whole poultry world.

We really must grant an extra amount of thanks to our rthy Treasurer and Editor for the splendid choice of subjects has persuaded our members to discuss.

Twenty-three articles on subjects vitally important to all ultry-keepers. These articles are not the pet theories of Fleet reet Journalists, but are the result of years of labour and periment freely given for the benefit of their fellow members, d which in many instances if followed up should result in l financial gain.

The Lady Rachel Byng, in a most interesting and instructive nner, gives the commercial methods of treating Angora bbits for the production of wool. Mr. J. P. Harding, whose de knowledge of general farming cannot be questioned, treats poultry breeding from the standpoint of the general farmer rticulars of a very interesting and novel experiment in the mash feeding of ducks are given by Margaret F. Sayer. e commercial poultry farmer will be interested in Mr. J. H. wden's description of his incubator house, a subject which is quently neglected. Mr. C. E. B. Philcox gives some very eresting particulars in regard to the very thorny question of oder houses and flame brooders.

very novel experience is described by Dr. Everard with ard to incubating and rearing by means of the combined ion of hen and incubator, which will appeal most to the aller breeder. An interesting note by Dr. Rosedale follows. Rearing for stamina, by Mr. Dowden, gives some most valu- e hints and photographs, which should be digested by the mmercial section. Mr. Philcox demonstrates the proper com- rcial methods for preparing table ducklings, based on experi e and success. The remarks of Mr. W. G. A. Browne will be ch appreciated by those who use fireless brooders. The art caponising is fully described by Mr. Forrest for the benefit of table poultry section. Possessed of a keen aptitude for search work and close records, Miss Malcolm and Mrs. Pember uss thoroughly the factor of hatchability in hens.

The very much neglected subject in regard to the marketing eggs is tackled by Mr. F .G. Swan, who makes some very monsense remarks.

We all welcome the advent of Mrs. Tom Newman, with her y years of wide experience. Mrs. Newman gives us some y important information in regard to laying trials.

ome interesting remarks are made by Mrs. Porter-Porter with rence to the evergreen subject of early hatching.

aluation information, based on experience, is given by Miss ddison in regard to matters relative to pedigree breeding.

t is somewhat of a novelty to see Mr. Bostock Smith dis- sing rabbits instead of poultry, but he gives some valuable mercial facts to those who are interested in the "New Fur bit Industry." If Mr. Bostock Smith supports it, you may s there is money in it.

ome important facts are given by Mr. Tom Newman in nection with the Wellingham Experiments, which are well th careful study.

ome of the difficult problems of poultry farming are explained Mr. Morris Hammond with the necessary methods of circum- ing them.

ome questions which continually worry poultry farmers are wered by Mr. Tom Newman.

r. Fletcher Hearnshaw, with his wide knowledge of exhi- n and utility poultry, makes some very true and poignant arks in regard to the use and abuse of utility shows.

r. Harold Paine discusses ducks and disease, and remarks urably on their freedom from trouble.

ith many years of farming experience behind him, Mr. John kings gives his opinions on "Eggs plus meat," which will est the man out to make money.

Mrs. Tom Newman winds up the most valuable collection of practical articles I have ever seen in any poultry year book, by describing the methods for keeping turkeys for profit.

A mass of valuable information follows, then a reprint of a valuable article on "Rules in Mating and Breeding Stock," by our late revered guide and friend, Mr. Oscar Smart. If he could but see the extent his pet Society has grown.

The Register of members' trapnested breeding pens may justly be described as "The finest record of performance in the world," and members have plenty more like them at home.

And now, Mr. Editor, if my criticisms have exceeded your available space, please blame your worthy Register Editor, who has exceeded all previous efforts.

May I appeal to every reader of "Eggs" who is not a member to send his subscription and receive a copy free. There is information which will bring money to the reader. There are many tips which, if put into practice, may make all the difference between success and failure. If you are a rich man you can afford to ignore them. If you are a struggling poultry farmer, working hard and not meeting with much success, take my advice: JOIN UP.

ANSWERS TO QUERIES—Continued.

F. D. D. (Bucks) is getting ten eggs a day from 86 Leghorn pullets, which he declares look in topping condition. They are given wet mash in the morning and grain feed at 4 p.m. The mash consists of 3 parts flaked maize, 1 Sussex ground oats, 1 biscuit meal, ¼ part meat meal, the whole scalded overnight and dried off to a crumbly consistency with toppings. The mash in itself looks good enough, but there is no mention of green food, and there is also a great deficiency of lime salts. "Topping condition," what does it mean?—just fit to lay, and lacking that little bit extra which will produce eggs. My correspondent will do well to replace the meat meal with fish meal, or a good sample of meat and bone meal, and to increase the quantity to one third part. Further, it would be advisable to add one part alfalfa meal to the mash, and he should be perfectly satisfied that the birds have sufficient grain as the last feed.

Anxious (Chester) had an exceedingly bad hatching season last time, and wishes to know whether I think it may have been due to the fact that he followed maker's instructions and removed both felts and also cooled the eggs. He at no time succeeded in hatching more than 52 per cent. of fertile eggs, and on one occasion hatched only 33 per cent. I am wondering whether the nom-de-plume he has chosen is in any way an explanation of his poor results. We may be certain that the fact that he followed maker's instructions in no way accounts for them, although I believe results would have been better had he not removed the felts or cooled the eggs. He has sent me no particulars, and there may be so many contributory causes, such as the stock birds, which I strongly suspect, stale eggs, bad feeding, incorrect thermometers, too low a temperature during the early stages of incubation, etc., etc. In answer to one question ,the best temperature at which to run a Glevum 250-egg machine is 105 degrees the first week, 104 the second, and 103 the third.

G. M. (Aylestone). The S.P.B.A. is in a position to supply dry chick feeds, and also chick mashes. We will send you price lists if you send a card to this office. (2) There is nothing to be gained by giving a chick feed because it contains several varieties of seeds, if many of them are difficult of digestion such as lentil, split peas, millet, dari. The value of the chick feed doesn't depend upon the albuminoid ratio; if dried milk is added, it should be at least 15 per cent. I have never seen a dry chick feed advertised to contain dried milk, and hardly understand your question. (3) Yes, I do believe that we can avoid a heavy mortality by rearing chicks intensively for the first six weeks of their lives; but we will discuss that later, there is not space here.

"Kilrane" (Co. Wexford) asks whether she is correct in believing that pollard is poorer than middlings. The term "middlings" is rather comprehensive; it means anything from a low-grade flour to fine bran. Generally we understand pollard to be a fine bran, and whenever that term is used it is understood in that sense.

" Undecipherable " (———). I am compelled to answer this query through these columns, as the signature of the writer is undecipherable and no address was given, although I understand the writer is a member of the S.P.B.A. Now to come to the point. Since the beginning of September he has been doing very badly with his poultry. The percentage of egg production has been much lower than last year. The hens have not looked well, were light in condition and fed badly, both grain in the morning and wet mash at night. Some days they would hardly come to the troughs; besides this, the droppings did not look healthy. In October my correspondent sent me samples of fine sharps and bran which he was using in the mash. These I classed as poor, and he has replaced them—he hopes with something better. He did not think this was the real cause of the trouble, especially as the hens were eating very little grain—always fed to them in straw litter. The mash he is using is 2 lbs. bran, 4 sharps, 1 Sussex ground oats, 1 maize meal, ½ fish meal, and a **handful** of dried yeast. He gives Canadian or the driest English wheat he can get, kibbled maize and clipped oats in turn. All the hens are on free range, and have plenty of cabbage. The stock cockerels, which are in separate pens, fed up perfectly well on exactly the same ration and were in first-rate condition. At the end of October several of last year's hens who had not finished their moult began a nasty cough, though they showed no running at the nostrils. He then decided to use " Visol " in the drinking water in case there was any chance of roup or such ailment. He also strewed the dropping boards and floors of the houses with malt dust. This made the house look and smell nice and clean. He noticed that the hens were always keen to pick up what they could eat of this, and he quite thought that anything they got would do good rather than harm. He had tried everything else without success. He decided to discontinue its use, and in ten days he found a marked improvement all round. Now the hens are eating 75 per cent. more mash, are bright and full of energy in the morning, and are looking quite different, and the droppings are quite healthy. The egg production last week had increased to 37.2 per cent., almost equal to last year. He thinks probably he is entirely wrong, but he is inclined to think that the cause of the trouble has been indigestion from eating the malt dust, but would be glad to have my opinion. This is an extraordinary case. I do not think my correspondent is wrong when he attributes the trouble to the malt dust. Malt dust may prove a valuable food, but when it is fed in any way in excess it causes severe scouring, and it also contains a slightly poisonous substance, known as Hordenin, which probably caused severe digestive disturbance. When malt dust or malt culms are used, great care should be taken not to use these in excess. At no time should they consist of more than 10 per cent. of the mash.

" Perplexed One " (Chobham) writes that she has a good man, who is an inveterate smoker. To her horror last year, with the drawer open and eggs exposed, he stopped to light a cigarette and smoked the whole time while turning the eggs. Of course his fingers are mahogany-colour with the tobacco stain. After handling an egg it smelt strongly of tobacco. " Surely, Mr. Newman " (writes the lady), " the fumes from the tobacco cannot be good for the eggs? " She had a 96 per cent. hatch, but 86 per cent. died during the first three weeks. My correspondent says she is inclined to think the fumes of the smoker must be detrimental to the eggs, and asks if she can hope for a few of my fatherly remarks through " Eggs." I think if I had a man who was an inveterate smoker and could get 96 per cent. hatchability, I should be inclined to supply him with cigarettes often; though the mortality was abnormally high, we need not trace this in any way to the effects of the nicotine upon the exterior of the egg. My correspondent should look for some other cause as to the high mortality amongst the chicks. It is probably B.W.D. However, her figures are very extraordinary. 96 per cent. hatchability and 86 per cent. mortality, and apparently no effort was made to discover the cause of these extraordinary losses. I hope none of my readers will come to the conclusion that the extraordinary hatchability was in any way due to the smell of the tobacco smoke. In cases like this I always think it is wiser to adopt the attitude that it is **in spite of** and not **because of.** I do not think my correspondent need worry over the fact that her man is an inveterate smoker, but it would be wise to know the cause of the mortality amongst

(Continued at Foot of Next Column).

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Contributions.—The Editor will always be pleased to consid contributions. Criticisms and queries are invited.

Interested readers are asked kindly to mention the existence " Eggs " to their poultry-keeping friends.

Subscriptions to " Eggs," 12s. 8d. per annum; 6s. 4d. for months; 3s. 3d. three months, post free.

Subscription to S.P.B.A., 5s. per annum.

Subscriptions should be sent to Mr. TOM NEWMAN, T Beeches, Rudgwick, Sussex.

Editorial Matter and Correspondence to the Editor, The Beech Rudgwick, Sussex.

All communications with regard to Advertisements should addressed to Mr. S. H. Burles, " Eggs," 94, Farncombe Stre London, S.E.16. Telephone: HOP 894.

NOTICE TO ADVERTISERS.

Owing to the ever-increasing circulation of " Eggs," it imperative that new advertisements and alterations are recei by FIRST POST ON FRIDAY MORNING to ensure insertion in following Wednesday's issue. It is hardly necessary to add t the earlier in the week we receive copy the better it is for eve one concerned.

Classified Advertisement Rates will be found at top of last p of classified advertisements.

PROOFS.—We cannot guarantee to submit proofs unless c plete copy is to hand by FIRST POST ON THE MOND PREVIOUS TO THE FOLLOWING WEDNESDAY WEEK'S ISS

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION.

APPLICANTS FOR MEMBERSHIP.

Barker, John, Model Egg Farm, Crawley, Sussex.
Lawrence, Miss F. M., Court Farm, Llantarnam, Monmouths
Moult, George F., " The Poplars," Styal, Nr. Manchester.
Truman, Miss L. C., The Bungalow, Peak Hill, Sidmouth.
Elder, Hugh, Grain and Seed Merchant, City Mills, Dunferm
Sharp, G. C., Linwood Lodge, Walesby Road, Market Rasen, L
Woodfine, G., " Broad Croft," Lymington, Hants.
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Yelland, A. H, Langstone, Lea Road, Wolverhampton.
Buckle, Capt J., 8, North Station Road, Colchester, Essex.
Farish, J. (Junr.), Marston Hill, Nr. Northwich, Cheshire.
Tangye, R., Lockeridge, Upton-on-Severn, Worcester.
Ada, J. E., c/o Mrs. Linsull, 11, Bank Street, Braintree.
English, S., " Beechmount," Poyntzpass, N. Ireland.
Barnes, W., 2, Forest Street, Oldham.
Reid, Mrs., Gowanbank, Inseh, Aberdeenshire.
Turner, D., South Clifton, Newark, Notts.
Parramore, G. F., 20, Housley Villas, Chapeltown, Nr. She
Insoll, F. N., Wellgrove Farm, Pembury, Tunbridge Wells,
Siddom, Mrs. G. H., Thoresthorpe Manor, Alford, Lincs.

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these chicks, and if they were bred from her own stock should have the breeder's blood tested.

M. O'H. (Leeds). The sample of ground oats is of average quality, and good value for the money. The sam mark applies to the meat and bone meal.

C. S. W. (Mansfield Woodhouse) writes that a friend said the other day, that from a flock of Rhode Island White Wyandottes and White Leghorns, all pullets, and into account all repairs to places and incidental expenses, she made 15/- per week profit. Do I think it is the usual or is it under-estimated—he himself thinks it rather poor? I do think this a poor profit; it does not amount to 4 head per bird, and the production must be very poor, or th or production excessive. But I have no particulars. Very in such cases as these, we find labour charges excessi money wasted on costly proprietary mashes, or the g management is bad; often the stock is late hatched, or ferior. There are so many causes which may contribute t a small profit; the marketing, too, may in itself be a su explanation

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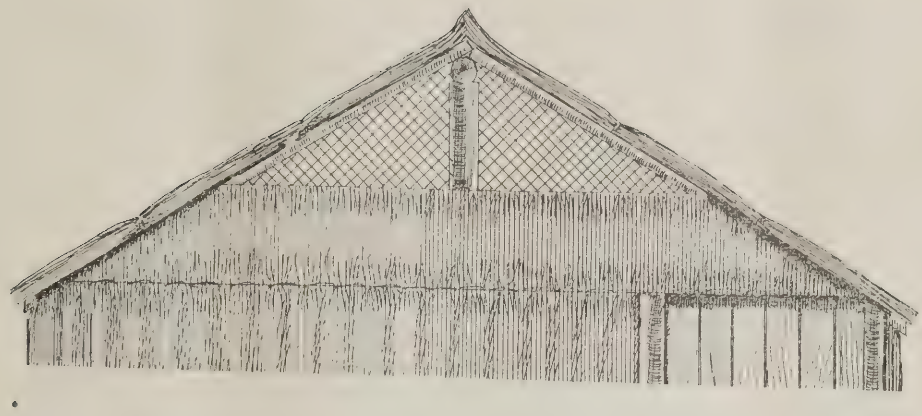
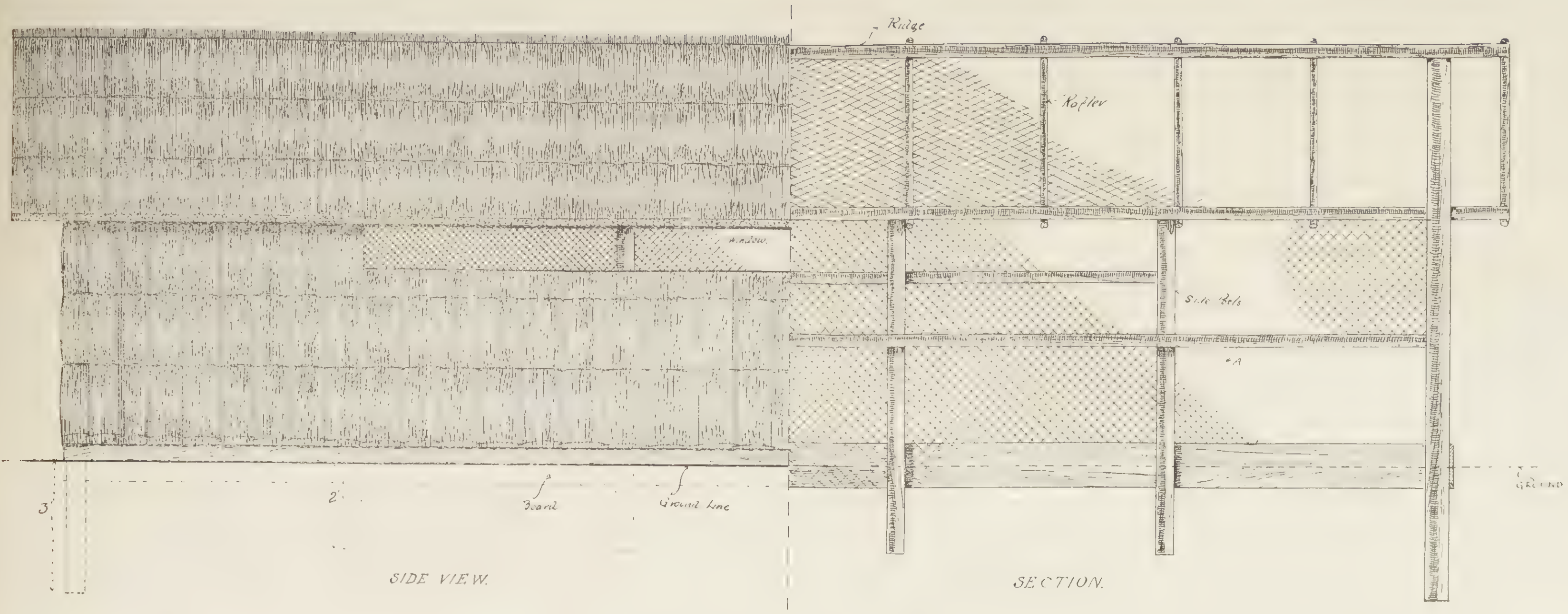


Supplement to "Eggs" Dairy Show Number, October 21, 1925.

STRAW POULTRY HOUSE

Design by L. G. PRICE.



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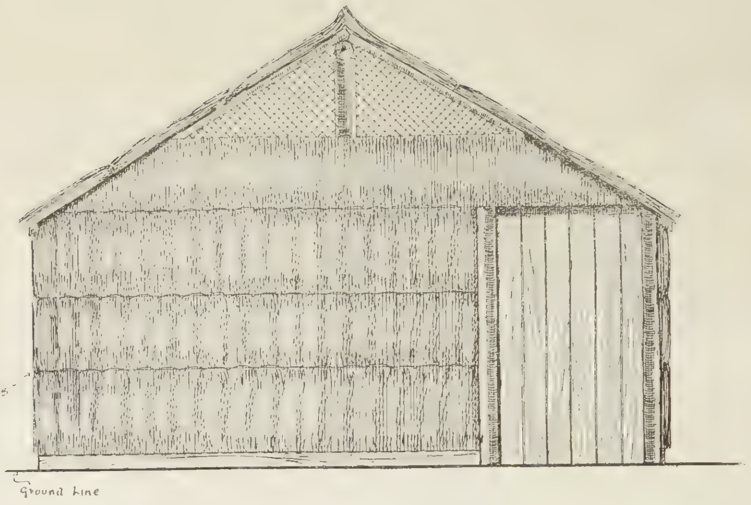

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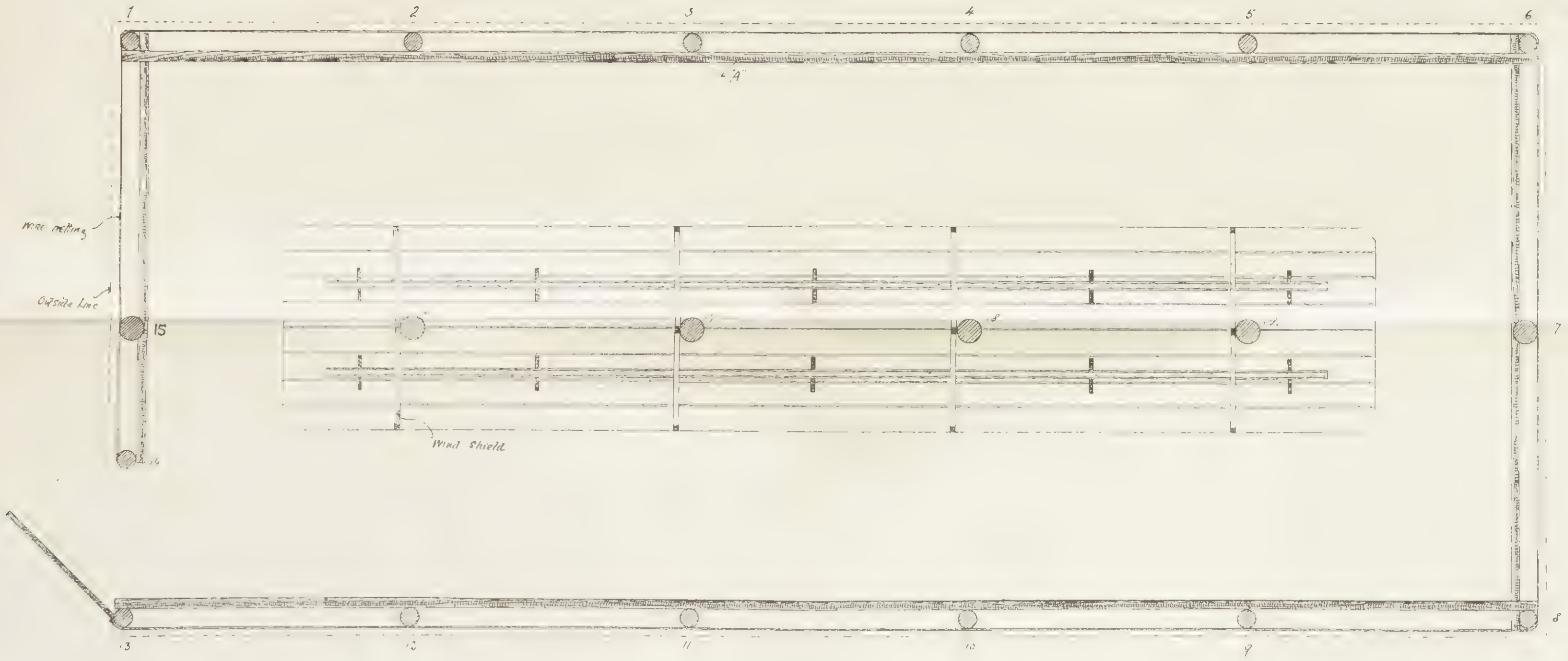

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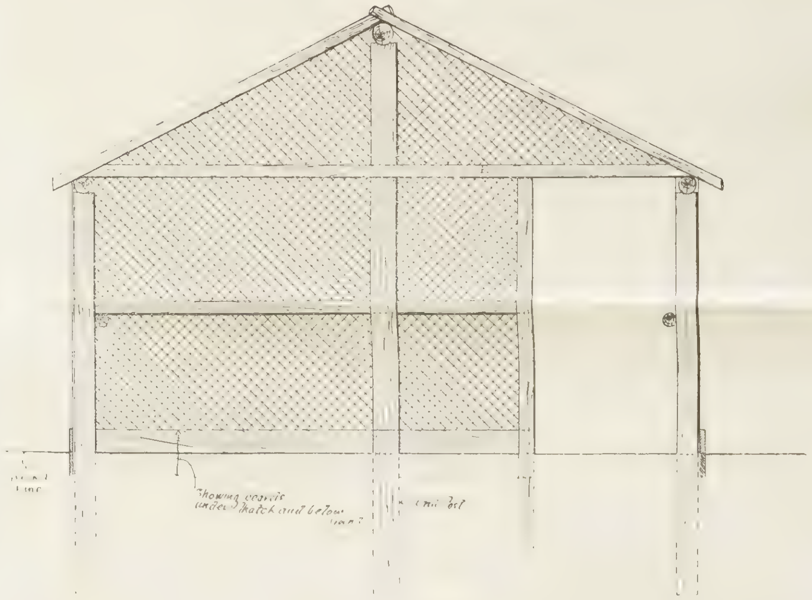

END SECTION.

W. E. Ellery Anderson,
Shetcombe Poultry Farm,
Winchcombe, Glos.

The Egg
AND THE
Incubator

By TOM NEWMAN.

Who has not heard the story of the old hen ho stole her nest, and came to the back door ith a baker's dozen of chicks behind her? Once aving heard this story, we are never wholly able o clear our minds of it, and we get the idea that he sitting hen is a 100 per cent. hatcher, so we ose our perspective, and are perhaps a little inlined to think that more mischief occurs in the ncubator than is really the case.

If we practised hatching with hens on a large cale we should speedily be disillusioned, and hould probably find that the average hatch did ot exceed 75 per cent. Nevertheless we have aken Biddy as our model, makers of incubators rom the earliest days have studied her habits, nd have applied and mis-applied them to artificial ncubation.

It is probable that the actual margin between he hen and the incubator does not exceed 10 per ent. I compute the average incubator hatch nder normal conditions at 65 per cent. of eggs ncubated, and under the hen, as mentioned above, 5 per cent.

It has been my unfortunate lot to examine a arge number of unhatched eggs for members of he S.P.B.A. during the last two hatching seasons —more than 2,000 each season—and I have been orced to the conclusion that at least 70 per cent. f the failures to hatch are due to the eggs themelves being at fault, that in 20 per cent. more the embryo is weakened, or dies, because the eggs are stale, or have been badly stored previous to incubation. With that point I will deal presently, it will be wiser first to consider the structure of the egg.

THE SHELL consists principally of carbonate of lime, and is porous. This permits the slow evaporation of moisture, and as the embryo develops allows the escape of the carbon dioxide produced, and the intake of oxygen, which is probably in direct proportion to the escape of carbon dioxide.

THE MEMBRANES.—Inside the shell are two membranes, the outer remains in close contact with the shell, the inner shrinks with the shrinkage of the contents caused by evaporation, and separating at the larger end, forms the air cell.

WHEN these membranes are MOIST they readily permit the escape of the carbon dioxide, and the intake of oxygen, but, WHEN they are DRY, they are impermeable to these gases. Now here is the important point in reference to the storage of eggs, **the greater the evaporation the drier becomes the membrane, the slower the intake of oxygen and the expulsion of carbon dioxide, with the result that the developing embryo is so weakened that it will not have the vitality to hatch,** or, if it does, will prove but a weakly chick, susceptible to disease and a menace to the rest of the flock. I wonder, I very much wonder, whether when we discuss problems of disease, we ever give sufficient attention to the results of hatching from stale or badly-stored eggs. The question is so often asked, "How long can I store eggs for incubation?" It is not a question of "how long," an egg may be kept a month and still hatch, but it will not hatch a strong chick; every day you keep an egg it deteriorates, and the less chance is there of hatching a strong and vigorous chick—even if we hatch one at all.

HEN OIL.—The advice, "get nearer to nature," is sound, but it is not always easy to interpret the old dame, and perhaps this has never been more clearly exemplified than in the case of hen oil and hatchability. We are all aware that the oily secretions of the hen's feathers impart to the shell of the egg under a sitting hen a thin film of oil. Learned men have spilt much ink over this oil, regarding it as a wise provision of nature. An attempt has been made to analyse it. It has been suggested that it has a chemical effect on the shell of the egg—that is, it softens the outer membrane, and prevents too rapid evaporation; and we have tried substitutes for it, such as goose grease, lard, olive oil, butter, not to speak of margarine, and even hen oil itself. Then we have gone to the other extreme, and have dressed the shell of the egg with acetic acid; and, a few years ago, an American excitedly announced that the secret of successful hatching was to wipe the egg on the 18th day with a wet rag to remove the film of oil, which prevented the developing embryo from getting a sufficient supply of oxygen. If we consider for one moment that the shell is porous, and how this porosity affects the developing embryo, we shall see how fallacious it is to cover the egg with oil or grease. The film of oil is but an accident of nature, which does not affect the hatchability of the egg in any way. In cases where the advice of our American friend was followed, results were variable—sometimes worse, sometimes better—whatever the results, they had nothing to do with the removal of that film of oil. As for the acetic acid, we should remember that it is the effect of the carbon dioxide **within** the egg which causes the shell to disintegrate.

OXYGEN.—It was freely asserted that the most prolific cause of dead-in-shell was the lack of oxygen in the incubator; more ventilation was advised. We were told that the chick perished because of the lack of oxygen, or from an excess of carbon dioxide, so longer airings were given, and the felts were removed earlier, with rather worse results than before. Then, in 1916, I drew attention to the habit of the Brush Turkey, which builds huge mounds of decayed vegetable matter, scrapes a hole in the bottom, and leaves its eggs to be hatched by the heat which is generated by the decayed vegetable matter. Obviously under such conditions carbon dioxide must be present in very large quantities; there must be a sufficiency of oxygen or the embryo could not develop, but it is some indication of the small quantity required. The attempt to introduce mo
oxygen into the incubator, or by giving longer a
ings, resulted in the more rapid drying of the me
brane, and so defeated its own object. A few yea
later the other extreme was advocated, the int
duction of more carbon dioxide into the incubat
for what reason I have never quite understood—
all events no better results accrued.

It we take the analysis of the air under a sitti
hen and compare it with that of the incubat
we shall find that under the hen there is an av
age of 31.93 parts carbon dioxide in 10,000 pa
of air; in the incubator there are only 9.9
There is this vital difference. In the incubat
the carbon dioxide comes largely from the eg
while in natural incubation by far the greater p
of its comes from the hen's body. Obviously the
is not much need to worry over lack of oxygen
the incubator; where this has been introduc
experimentally wretched hatches have result
and chicks failed to live.

Atwood measured the amount of carbon diox
evolved at various stages of incubation, with t
following results:—

AVERAGE PERCENTAGE LOSS OF
CARBON DIOXIDE.

First Five Days	Per Cent.	.157
Second Five Days	,,	.768
Third Five Days	,,	3.786
Fourth Five Days	,,	7.517
Twenty Days	,,	12.228

Further experiments showed that carbon diox
is not a limiting factor in incubation; the norm
embryo is able to withstand a wide variati
Little effect was observed on the percentage hat
when the carbon dioxide occurred in from 30
60 parts in 10,000, but as the amount rose to ab
150 there was a marked decrease in the num
of chicks hatched.

It has been remarked that the addition of mo
ture to the incubator resulted in the increase
the carbon dioxide from 9.15 parts, in the
machines, to 10.46 parts with those run w
moisture. Also the vitality of the chicks was
creased by the use of moisture. There is a
greater percentage of carbon dioxide under
sitting hen than in the incubator, and the h
hatched chicks have the greater vitality.

No explanation of this is offered, but we m
surely disabuse our minds of the idea that
presence of carbon dioxide is the cause of
better hatch or the increased vitality of the chic
It is well known that the greater the vitality,
greater the carbon dioxide evolved. The proba
explanation is that the addition of moisture p
vented more rapid drying of the membrane, w
the result that the intake of oxygen was grea
and increased the vitality of the chick, and t
may explain the small increase in the amount
the carbon dioxide.

COOLING.—It is safe to say that no incuba
has been placed on the market, since the Hears

which the makers have not advised that eggs ould be cooled, OR aired. Makers do not pear to be very clear as to what is meant. Some them say: "The hen comes off her nest every ay to cool her eggs"; others speak of it as "a ise provision of nature." But is it so? Are we ot endowing Biddy with reasoning powers when e make such a statement? Would it not be more asonable to suppose that she merely comes off feed, and that the cooling or airing is but a incidence? Is there any definite evidence that e embryo derives any benefit from this cooling? is possible to produce evidence that it does not, ut none to produce evidence that it does. Con- der the advice to cool for twenty minutes during e last week of incubation. Should we take a ay-old chick from a brooder with a temperature say, 90 degrees, and subject it to one of 50 r twenty minutes, and expect it to survive? Of ourse we shouldn't; then why, in the name of ommonsense, take an egg with a growing embryo om a temperature of 103-5 and subject it to one 50 or even lower for that time—and often wer than this? If we believe it is a case of air- g, and not cooling, then is it logical to close own the incubator on the 19th day, when the nbryo requires far more oxygen than it did a eek previously? In 1917 we wrote an article estioning the value of cooling. The following ar an experiment was undertaken at one of the merican Colleges with 3,000 eggs, half of which ere cooled and the remainder not; the uncooled gs gave the better hatchability, and there was slightly lower mortality among the chicks up to weeks old. In the case of a badly-ventilated cubator the air may become stagnant. In that se long airings may be advantageous, but care ould be taken that the eggs do not become illed.

TEMPERATURE.—The incubator room itself ould be well constructed. A cellar answers very ll, as there is little difficulty in securing an uable temperature, but failing that the room ould be double walled, and packed with some aterial such as sawdust. Great attention should paid to the roof. One of the best incubator oms I was ever in had a thatched one. On S.P.B.A. experimental farm we hope to try cheap one with a corrugated iron roof, packed the inside with straw.

The ideal temperature is 65 degrees Fahr.
It should never be below 40 degrees Fahr.
It should never exceed 79 degrees Fahr.

If it is possible to maintain a temperature of tween 55 and 65 degrees, there will be little uble with the moisture problem. In a tank chine at this temperature it would not be cessary, and perhaps not advisable, to supply isture until the tenth day; if a lower tempera- e prevails, it should be supplied from the first. a tank machine sand or moss litter saturated h moisture gives a better evaporating surface n water alone. The question of moisture and nperature of room are very closely allied.

INCUBATOR TEMPERATURE.—Experiments have proved that if you take eggs from under a sitting hen after the first five days and transfer them to an incubator you get greatly improved results. Reverse the process, and transfer the eggs from the incubator to the hen, and you get no improvement. This is important because it narrows the issue. It cannot be a matter of oxygen, because, as we have shown, there is more oxygen in the incubator than under the hen, and the embryo at this stage would require very little oxygen indeed. It is, of course, possible that the evaporation of moisture is better controlled by the hen than in the incubator, but the real point seems to be one of temperature, and there is little doubt that with the larger incubators a large number of germs perish, or are so weakened that they fail to hatch, because of too low a temperature during the early days of incubation. The inside temperature of an egg under a sitting hen at the end of the first 24 hours of incubation is 100 degrees Fahr.; at the end of a week 101 degrees; the increase would be due to the increase of animal heat from the developing embryo. In an incubator, with a suspended thermometer registering 103 deg. Fahr., the inside temperature of the egg at the end of 24 hours is only 97 degs. It is a well-known fact that the smaller the incubator the better the percentage hatch; with the larger machines (I am not writing of Mammoths) there is a great variation in the temperature of the egg chamber, varying as much as 5-6 degrees from the centre to the outside row. The best results we have had have been with the suspended thermometer registering 105 degrees in hot-air machines of 100 size upwards for the first week, 104 the second, and 103 the third; and these results have been confirmed by many readers of "Eggs" who have followed this advice.

TURNING.—Some years ago Mr. Godfrey sent us particulars of his experiments of hatching without turning the eggs. He used about 1,000 eggs, and the hatching results were quite good, but not one of the chicks lived to be more than six weeks old, and in every case where a post-mortem was made it was found there was unabsorbed yolk. It is said that if the egg is not turned the germ will stick to the shell, but that is not so; the object in turning is to secure the more equal distribution of heat over the whole body of the egg. American experiments have demonstrated that the more frequent turnings give the better hatch and the stronger chicks. A comparative test we made with six incubators, turning four times a day and six only two, gave much better results over a whole season to eggs most frequently turned. In neither case was there any cooling, self-turners being used. Everyone will appreciate the necessity of testing thermometers before starting the hatching season. I am often asked for an address to send them for testing. They should be sent to:—**The Director, National Physical Laboratory, Teddington, Middlesex.** The charge, I believe, is 2/9, including postage.

STORAGE.—As mentioned before, the storage of eggs intended for incubation is of the greatest importance, affecting not only the chances of a successful hatch, but the health and vitality of the chick. A well-stored egg will give better results after ten days than one which is merely laid on a shelf exposed to varying degrees of temperature at five days old.

The best temperature at which to store eggs is 50 degrees Fahr. They should be stored in bran, or wrapped in newspaper, on their sides, airing is quite unnecessary.

SELECTION OF EGGS.—Badly-shaped, thin-shelled, abnormally large or small eggs should not be incubated.

The eggs of the pheasant and guinea fowl take 25 days to hatch. Both of these birds are finer and smaller in bone than many varieties of our common fowl. The shell of the egg is of much closer texture and thicker than the shell of the hen's egg, and we may assume to this cause alone is due the slower development of the embryo. This is a point which has not been given sufficient attention in the investigational work connected with the dead-in-shell problem. In examining one dozen eggs sent, ten of which had contained chicks which had reached the 20th day, we found that in eight of these eggs (White Leghorns) the shell appeared wholly unaffected by the action of the carbon dioxide, during incubation, in spite of the fact that the membrane was in a moist condition. The shell was in every respect like that of a new-laid egg, and it was due entirely to this that the chicks failed to hatch. After noting this fact, care was taken to examine the shell of a large number of eggs, and in a considerable percentage we found conditions exactly similar to those described above—the chick fully developed, the membrane moist, not brittle, as is the case of unhatched eggs which had reached the same stage of development. In the great majority of these cases the eggs were not those of the sitting breeds. Barnevelders lay an egg with an exceptionally thick shell of close texture, and their eggs are more difficult to hatch in incubators than those of any other breed. The difficulty would be met to some extent if moisture was supplied from the first, and the eggs were sprayed during the last few days of incubation. In many of the eggs sent there was reason to believe that had they been given a few more hours in the incubator the chicks would have hatched successfully. Some Rhode Island Red eggs had very thick shells, and failure to hatch was in some cases due to this; but it was not noticeable in the eggs of Wyandottes or Sussex, and very rarely in the non-sitting breeds.

It will be agreed that in studying dead-in-shell problems we have given far too much attention to incubator conditions, and too little to the egg itself. The clutch of eggs we place under a hen will not differ so materially from one another as th twenty score we place in an incubator, and w cannot expect the egg of the Barnevelder with it much thicker shell to hatch under exactly th same conditions as that of the average Leghor or Wyandotte. It is certainly a mistake to hatc the eggs of these breeds together.

It must be evident, when the embryo dies befor the 15th day, that only one condition in th incubator is likely to cause this mortality—to high or too low a temperature.

EGGS INCUBATED should always be fror healthy, vigorous, and well-matured stock, siz average for the breed. They should be carefull fed, not forced for eggs by the excessive use c animal food, or spices which are always injuriou Highly-fecund hens intended for breeders shoul be moulted out in September, by slightly reducin the food, confining them to a warm house, and pu them on full diet when the feathers begin to fa freely. A good mash for breeding hens is a follows :—

Bran and Alfalfa Meal	**1 lb. each.**
Middlings	**4 lbs.**
Sussex Ground Oats	**1½ lbs.**
Maize Meal	**½ lb.**
Fish or Meat and Bone Meal	**½ lb.**
Dried Yeast or Soya Bean Meal	**½ lb.**

TO SUMMARISE :—Careful storage of eggs essential to successful incubation. Stale or bad stored eggs means dried membranes, incapable permitting escape of carbon dioxide, or intake oxygen.

Eggs should be stored on their sides in bran wrapped in newspaper, at a temperature as near as possible 50 degrees Fahr.

The ideal temperature of the incubator room 65 degrees Fahr. Large numbers of germs peri or are so weakened that they fail to hatch becau of too low a temperature during the first few da of incubation. The best temperature, with a su pended thermometer in incubators of 100 or ov capacity, is 105 degrees the first week, 104 t second, and 103 the third.

Eggs should not be cooled or aired.

Felts should not be removed until the 19th da and then one should be allowed to remain.

The more frequent turnings the better t results.

No applications of oil, grease, or acid to t shell will in the least assist hatchability. Hat ability of eggs is an inherited factor.

Feeding may lack the elements essential to t building-up of a vigorous healthy chick.

Everyone should study their own conditior What is advisable in a dry attic will not give gc results in a damp cellar.

As a last word, it is never advisable to all chicks to stay long in the nursery drawer of incubator. There is a difference of 20 degr in the temperature of the egg chamber and drawer; chicks become chilled, with the c sequent high mortality.

Printed for the Proprietors by the City and South London Printing and Publishing Co., Ltd. (T.U.), 94, Farncombe Street, S.E.
Edited by Mr. Tom Newman, and published by the Scientific Poultry Breeders' Association, Rudgwick.

Supplement to "Eggs," October 7th, 1925.

Scientific Poultry Breeders' Association.

Nominations for Election to Council.

Candidate.	Address.	Vote.
CLAY, Mrs. M. B. E.,	The Riddings, Long Preston, W. Yorks.	
*DOWDEN, John Hobart,	Heydown, Heathfield, Sussex.	
*FOULKES, P.-Hedworth	Pondover Lodge, Virginia Water, Surrey	
*MADDISON, Miss N. B.	Brookside, Dane Hill, Sussex.	
PHELAN, Michael P.,	Cleave Barton, Northam, N. Devon.	

There are three vacancies. Please place a X against the THREE CANDIDATES for whom you wish to vote.

Name ....

Address ....

....

Papers must be returned to the Secretary, The Beeches, Rudgwick, Sussex, not later than Friday, 16th October, 1925.

* Retiring Members seeking re-election

Supplement to "Eggs," October 21st, 1925.

If You are Not A Member of the S.P.B.A.,—Why Not?

Do you know the advantages of membership ?

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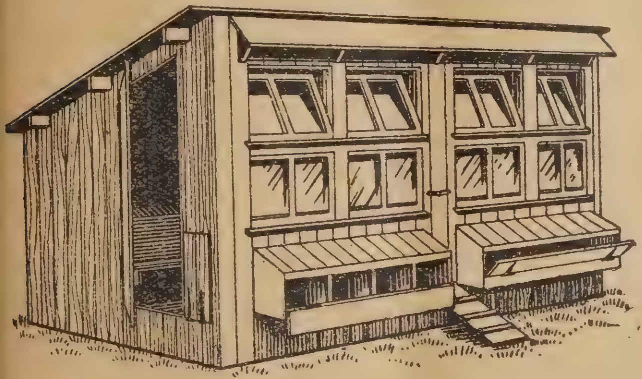

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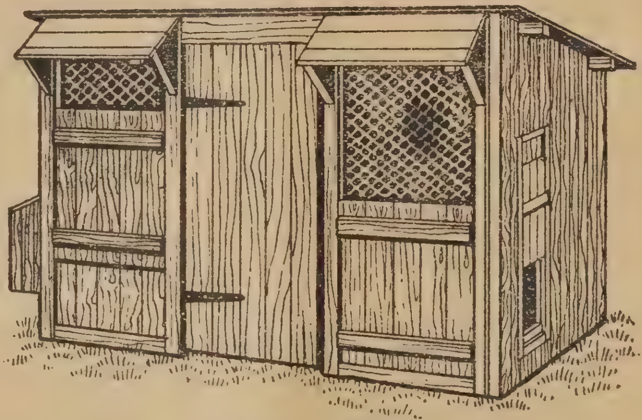

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Stock Cockerels. Magnificent March Rhode Island Cockerels; guaranteed hatched from eggs direct Golden's Pen 12; sire's dam 302 eggs first year, 230 second; excellent dark colour; ready mating; 21s. each. Also White Wyandotte Cockerels; Eggs direct Frank Snowden's Pen 2; vigorous, splendid type; 21s. each. Also early April W. L. Cockerels; eggs direct Frank Snowden's Pen 4; good combs; 15s. each. All approval. Carriage paid — Wilfrid Hawkes, M.S.P.B.A., Blackminster Poultry Farm, Evesham.

P. B. Adams, East Franklyns Poultry Farm, Hayward's Heath. Black Leghorn Cockerels and Red Sussex Cocks, Cockerels and Pullets for sale.

Splendid Laying Strains of Specially selected Cockerels, W Leghorns, W. Wyandottes (both Warwick Rogers' strain); R.I.R.'s (Whittle's), from 12s. 6d each. — Mrs. Higginson, M.S.P.B.A., N.U.P.S., Stanwardine, Ellesmere, Salop.

Magnificent Light Sussex Cockerels; well marked, clean under colour; from good record hens; £1 each.—Greenslade, Hemyock, Cullompton.

Bryn Poultry Farm, Bishop's Castle, Salop (P. Mills).

1st, HARPER-ADAMS, BUFF ROCKS.

White Wyandottes, Light Sussex. Cockerels from 15s .each.

BLACK MINORCA COCKERELS.

Capt. Whittley's Registered Pen direct; March hatched: 12s. 6d each Light Sussex, Bostock Smith-Chivers: also R.I.R.'s; 12s. 6d.—Freeman, Henley, Ipswich.

LIGHT SUSSEX COCKERELS,

Bred from own birds that won first place at the

MIDLAND LAYING TEST, TWO YEARS IN SUCCESSION.

From 21s.

RHODE I. RED,

Closely related to East Anglian Test Winners, from 17s. 6d. Customer writes:—"I am very pleased with the six cockerels you sent me." — Fred Gardner, Stalham, Norfolk.

COCKS AND COCKERELS.

FOR SALE.

White Wyandottes only. Few carefully-selected, individually-bred Cockerels, bred from high record layers of large eggs, mated to sons of large egg dams, which laid 667 eggs in three years, 634 eggs in three years, 275 and 280 eggs in pullet year.—Mrs. Burgess, Woodside, Tenterden, Kent.

Dr. Harbord offers Nine March White Leghorn Cockerels; all test winning ancestry: brothers to his pullets now holding first position, Wye College. 21s each in lots of three.—Detling Hill, Maidstone.

Frank Snowden Cocks and Early Cockerels, from trap-nested hens, with high winter records. Greatly reduced price; 15s. each. — Romford P. Farm, Pembury, Kent.

Twelve Magnificent White Leghorn Cockerels (March, 1925), all reared and running together and bred from my famous strain, winners of 3 Gold and 2 Silver Medals in Laying Tests. Pedigree with each bird. £10 the lot.—W. A. Darracott, Aylesbury.

Black Leghorn Cockerels, dams over 213, sire's dam 263. March, 15s.; April, 12s. 6d. Approval, deposit.—Capt. Maxwell, Leiston, Suffolk.

SOLD OUT.

My advertisement of R.I.R Cockerels in "Eggs" last week resulted in sale of my complete stock. I still have a few selected W. Leghorn Cockerels, Ransford x F. Snowden, and Ransford x Metcalfe (as previously advertised); 25s. Approval. A purchaser last week writes: "Received cockerel on Thursday morning Am pleased to say I am highly delighted with him." — Longford, Withington House, Abingdon, Berks

BLACK BRESSE.

Lady Stafford has for sale Two Prize-Winning Black Bresse Cockerels; £2 2s. each, also brothers of above, £1 1s. each; excellent for crossing. — Apply, Poultry Manageress, Wrotham Park Farm, Barnet, Herts.

BLACK LEGHORN AND LIGHT SUSSEX Cockerels; good, sound Stock Birds; from our Gold Medal Winning Strains. Write for prices and further particulars.—Thomson, Penypylle, Holywell, Flints.

NATIONAL LAYING TEST.

Roland Garrett's pen won Bronze Medal for Black Leghorns, 1924-5, National Test. Pullet 850 laid more first-grade eggs than any other Black Leghorn, Championship Section included. Cockerels, closely related, 25s.; approval. — Wheathampstead, Hertfordshire.

MRS. E. M. L. KNIGHT,

Manor Farm, Odstock, Salisbury, Feb. and March hatched Cockerels for Sale. White Leghorn. From hens laying 250-260 2 to 2⅛ eggs, sire from 291-egg hen, £2 2s. From hens having 220-236, all 2¼oz. eggs, sire from 289-egg hen, £1 10s. From hens laying 252-269 eggs, sire 280 2¼oz.-egg hen, £1 10s. From the Five Winners of Bronze Medal and Silver Cup at the National Laying Test, 1924, sire from 289-egg hen, £1 10s.; from birds laying 222-247 eggs, sire from 257 2¼oz. egg hen, £1. White Wyandotte. From hens laying 240-250 2¼oz. eggs, sire from 291-egg hen, £2 2s. From hens laying 235-240 2¼ oz. eggs, sire from 289-egg hen, £1 15s. From hens laying 224-232 2⅛oz. eggs, sire from 280-egg hen, £1. From hens laying 212-223 2-2½oz. eggs, sire from 258 2¼oz.-egg hen, £1 5s. Light Sussex. From individual hens laying 200-231 2¼oz. egg, sire from 310-egg hen, from £2 15s. to £3 10s. each. From hens laying 170-190 2¼-2½oz. eggs, sire from 270-egg hen, £1 10s. My Leghorns have won Bronze Medal and Silver Cup at the National Laying Test, Bentley, 1924—being third in all breeds in the Test. Also Silver Medals in Wiltshire Laying Test for 1924 and 1925. Wyandottes have won the Gold Medals in the Wiltshire Laying Tests for 1924 and 1925, and Silver. The Sussex have won the Walmesley Challenge Cup; Gold Medal of the National Laying Test, and a Silver Medal given by Sussex Club at the National Laying Test, Bentley, 1925. **Also the Silver Medals in Wiltshire Laying Test for 1924 and 1925.**

COCKS AND COCKEREL

FOR SALE.

White Bresse Cockerels, from hens
ing 2oz. eggs, as Pullets; B.O D
classic winning strain, from 21s.—L
R. S. Weston, Steeple Ashton. Trowb
Wilts.

Exchequer Leghorns; exceptionally
marked Cockerels; 12s 6d. each. —
West Monkton, Taunton.

Black Leghorns; very fine Cock
12s. 6d. each.—Innes, West Monkton,
ton.

Rhode Island Whites; good shape
cellent bone and colour Cockerels
1924 Pullets, 15s. each.—Innes, West
ton, Taunton.

Brown Leghorn Early Cockerels;
egg strain; from 12s. 6d.—Hudson
Chilworth P.F., Guildford.

Pedigree Cockerels. W. Wyan
R.I Reds. Individually bred from
nested stock pens; headed by Ba
Golden-Burgess; from 15s. Will Exc
few for W. Leghorn Cockerels, with
pedigree Approval.—Constantine,
ningley Hall Poultry Farm, Mix
Halifax

Barnevelder Cockerels (Middleman),
dams 226 and 243 2½oz. eggs; Feb. ha
20s.; March, 17s. 6d. Approval, dep
Capt. Maxwell, Leiston, Suffolk.

January and February, 1925, ha
Cockerels, rich even colour, splendid
birds, 10s. and 15s. each; 1925 early ha
Pullets, healthy, well grown, layi
about laying, 10s.—P. Sherwin, B
Poultry Farm, Buxted, Sussex.

National Laying Test. My White
dottes are now leading over all b
Closely related large egg Cockerels,
30s.; Feb., 25s.; March, 20s. Partic
Approval, deposit.—Capt. Maxwell, Le
Suffolk.

MISS HASLER, S.P.B.A., Frinton-o
Fine R.I.R. Pedigree Cockerels and
Old Hens; 15s. Eggs, 7s. 6d., 15s., a
per doz.

COME NORTH FOR STAM

Leghorn Cockerels; 15; progeny
hens 251 to 240; sire, son of 291
"Missouri Princess"; direct Frank
den; only April birds left; 12s. 6d.
Allan Thomson, Gowanbank Pe
Poultry Farm, Avonbridge, Scotland

R. B. DOBSON

Has for sale a few Pedigree Coc
from trap-nested stock; March and
hatched; White Wyandottes, Black,
and Brown Leghorns; dam's record
265; 15s., 17s. 6d., 20s., according t
and pedigree. Carriage paid; hamp
turnable.—Stretfield Poultry Farm,
well, Sheffield.

BROWN LEGHORN COCK

Street-Porter's best; two-year-olds;
condition; 21s. each. — Tom Brook
White Cross P F., Hedon, East York

G. KEITH SIMMONS
INDIVIDUALLY BRED
COCKERELS.

At the end of the three winter
my pens held the following positio

NATIONAL TEST:

WHITE WYANDOTTES, 1

HARPER-ADAMS:

WHITE WYANDOTTES, 4

WHITE LEGHORNS, 5th.

National Test Final Report: Wyan
5th; Leghorns, 9th. Harper-Adams'
Report: Leghorns 4th.

This year again proves my stoc

CONSISTENT.

Early-hatched Cockerels, from trap
Hens, with high records and ca
mated. Birds of excellent

COLOUR, TYPE, AND SIZE

Carriage paid on approval, with ful
gree, from 31s A few individual
White Leghorn Cocks at 21s. — F
Poultry Farm, Hembury Fort, H
Devon.

OCKS AND COCKERELS.

FOR SALE.

ite Wyandotte Cockerels, early hed; Harper-Adams' Gold Medal strain. from Gumston direct; dams 215-240; each.—Grant, Picquet-Piece, Andover.

gnificent Vigorous Black Leghorn erels; March-April; Frank Snowden's 1 blood direct; beautiful combs; re- "Daily Mail" winners; dam's records to 276; 21s., 17s. 6d., 15s each, accord- to pedigree; carriage paid; approva ngly. — Wilfrid Hawkes, S.P.B.A., kminster, Evesham.

ht Sussex Cockerels; gorgeous; Feb- y, March, April, 1925; 35s., 30s., 25s. ; sire's dam 200 first-grade eggs; car- paid.—Miss Harrison Bell, Welwyn s

e excellent L.S. Cockerels, by Leigh- schild male; sacrifice, £3 the lot. cal Breeding Hens, L.S. or W.L.; 7s. each. Hannaford 120-Chick Brooder, Two Rat-Proof Metal Brooders, 100- k size, £1 the two. All excellent order. tt, Ortonwaterville, Peterborough.

IVIDUALLY-BRED COCKERELS.

ode I. Reds, White Leghorn and White ndottes. We have some excellent birds disposal of above varieties; bred from Medal and Certificate Winners at per-Adams' and National Laying Tests. roval anywhere. Price from 15s In- tion specially invited. Satisfaction anteed. — Hodgkinson, Boundary Poul- Farm, Culcheth, near Warrington.

LARGE EGG STRAIN.

hite Wyandottes. Tested Cocks and orded Cockerels; gold medal laying in; true to type.—Captain Heseltine, ley.

EARLY COCKERELS.

hite Leghorns and R.I. Reds, from lead- strains of best Pedigree Stock. Records 75. Prices from 12s. 6d., carriage paid. roval. Particulars on request.—D. and Gradon, M.S.P.B.A., Northwood P.F., khill, Co. Durham.

ARBERY POULTRY FARM,

STOCKBRIDGE, HANTS.

ock Cockerels from individually-recor- hens. White Wyandottes, Rhode Island , White Leghorns, and Black Leg- s; dam's records 225 to 280; 10s. to 30s. according to breed and record. Full iculars on application.

303 EGGS IN PULLET YEAR.

88 WINTER RECORD.

teen March-April White Leghorn Cock- s, sired by son of hen with above d (668 in three years). They are ed to this hen, and should be prepo- in siring

FECUND

k, while the discrimination used in ting their parents has averted the pos- faults from careless in-breeding. All exceptionally

EALTHY, ACTIVE and VIRILE,

come up to utility show form. Prices: to 30s. Approval.

COXE,

g Coppice Lodge, Canford, Wimborne.

PHILIP CLAPHAM,

hite Wyandotte Cockerels now all sold. Buff Rocks left, half and full hers to my pullet leading first month, .V. Gloucester Trials. From 21s. — riff's Farm, Lyonshall, Herefordshire.

DUCKS AND DRAKES.

FOR SALE.

lected Khaki-Campbells (Long's). Five ks and Drake; 50s. Reduction on quan- s.—Taylor, Moss Edge, St. Anne's.

BACOT RANGER DRAKES.

brothers to my pen of Ducks that Bronze Medal at National Test, Bent- 21s.

HAKI-CAMPBELL DRAKES,

d by Drakes from Capt. Long's Bent- winners, 21s.—Fred Gardner, Stalham, folk.

DUCKS AND DRAKES.

FOR SALE.

Beautiful Large Pettipher - Thompson strain, Khaki-Campbell, March Drakes; no white bibs; dam's records 256 to 303; guaranteed egg records parents both sides available. "The individually-bred bird tells." 15s., 17s. 6d., 21s. each; carriage paid. Approval willingly.—Wilfrid Hawkes, S.P.B.A., Blackminster, Evesham.

Buff Orpingtons. A very fine Pen of Six Ducks (Wm. Cook's) and One Drake (Chittenden). 60s., carriage paid.—Miss Cardale, U.D.C., Painswick, Stroud, Glos.

Khaki-Campbell Drakes (1925), brothers of my Bronze Medal Winners, National Test, 15s., 17s. 6d., 21s. each. No white bibs. Approval, deposit.—Capt. Maxwell, Leiston, Suffolk.

BUFF ORPINGTON DUCKS.

Stock Drakes and Breeding Pens. All breeders trap-nested. Unequalled test records.—Captain Heseltine, Ropley.

TURKEYS.

FOR SALE.

Mammoth Bronze Turkeys. Valuable Breeding Pen: 30lb. stag, Four Hens, for £5. Last season's eggs, 95 per cent. fertile. Short of ground compels me to sell. — Spink, Strawberry Lane, Wilmslow.

TABLE PIGEONS.

FOR SALE.

Few Pairs left. Must clear at half price. —Fidler, Colehill, Wimborne.

BREEDING PENS.

FOR SALE.

LIGHT SUSSEX.

Dr. Harbord, having selected his Breeding Pens from his noted large flocks of free range, all graded hens, real rentpayers, can spare Three Pens of Six and Selected Unrelated Cockerel; six guineas pen. This stock of Sussex has a name for winter eggs, size, stamina, and beauty.—Detling Hill, Maidstone.

RHODE ISLAND REDS.

Dr. Harbord, having made up his Breeding Pens from 500 free range graded hens (Utility) of noted stamina, size, and proved prolific large egg layers, can spare a few useful Pens of six; 90s.; sound value Suitable unrelated Cockerels; 30s.—Detling Hill, Maidstone.

RABBITS.

FOR SALE.

FUR RABBITS.

OBTAIN THE BEST TO START WITH.

The following are a few of the honours won by the "Heaselands" Stud during the past few weeks, which is proof of their quality:—Preston, Two 1sts and Special; Bentham, two 1sts; Hartlepool, 1st and Special and Two 3rds; Maidenhead, 1st and Silver Spoon for best young Chinchilla, 2nd and 3rd; Hastings, Two 1sts; Southborough, 1st and 2nd; Dursley, 1st, 2nd, 3rd, and Reserve; Dover, 1st, Two 3rds; Whitstable, Two 1sts and Special, best Chinchilla; Five 2nds, Two 3rds; Darlington, 2nd and 4th; Barnstaple, 1st, 2nd, 3rd, and Reserve; Grand International, Crystal Palace, 1st in class of 77 Chinchilla. Does. 4th, five months' Bucks; 2nd, four months' Havana Does, claimed at catalogue price, £5 5s.; 2nd, three 3rds, Argentes, v.h.c. and h.c., Maraakas; Alsagar, 1st.

The above wins have been gained with Chinchillas, Argente de Champagnes, Havanas, and Beverens. I have a splendid lot of Young and Adult Bucks and Does in each of these varieties, also Black and Tan and Angoras, for sale, at very moderate prices. Even if you do not wish to commence breeding until the Spring, it is wise, in the interests of economy, to purchase your stock now.

The price of breeding stock advances considerably in the Spring. Take advantage of this opportunity, and let me know your requirements now.

E. BOSTOCK SMITH,
"Heaselands," Barham, Canterbury.

RABBITS.

FOR SALE.

Lady Rachel Byng, Angora Rabbit Farm, Sandhoe, Hexham, Northumberland. Exhibition and Wool Stock for Sale. Vacancy Day Pupils and Lady Apprentices.

For Sale, Beautiful White Angora Doe, Byng strain, with full pedigree; wonderful wooller, 30s.—Pondtail Poultry Farm, Kirby Cross, Essex.

DOGS.

FOR SALE.

Pedigree Cairn Terrier Bitch Pup, born November, 4 guineas. Also Cairn-Cairn-Aberdeen Dog Pups, born September, 30s. —Apply Winthrop, Bankwood, Charing, Kent.

APPLIANCES.

FOR SALE.

Galvanised Steel Corn Bins, 1cwt., 8s.; 2cwt., 13s.; 3cwt., 19s.; 4cwt., 24s.; 6cwt., 31s. 6d.; 8cwt., 37s. 6d. Hinge lids. Carriage paid.—Hudson, Sheet Metal Works, Patricroft, Lancs.

Poultry Fattening Appliances. — Neve Bros., Heathfield, Sussex. Catalogue free.

Fruit Trees and Poultry Netting Stakes; 6ft., 18s. for 50; 32s. per 100; carriage paid £1 order. All sizes quoted for.—Cureton, Shifnal, Salop.

110-Egg Phipps' Perfection Incubator, 1925 model; guaranteed working order; list price £10, sell £7. Inspection invited. Would exchange for good Foster Mother, Phipps' preferred. — Frank Harris, Wyeverne, Hewelsfield, Glos.

1,800 Glevum Mammoth Incubator, used two seasons with good results, must sell quick; leaving England January 9th; accept half maker's price.—Massey, 51, Chiphill Road, Bolton.

Glevum 1,800 Mammoth Incubator, excellent working order and condition, £60. Immediate dispatch given.—Miller, Poultry Farm, Gartsherrie, Coatbridge.

Incubators and Hovers, various makes. Lists free.—Draper, Poultry Appliance Provider, Blackburn.

Creosote for preserving timber, Black Varnish for corrugated iron, etc.; Red Varnish for damp house, gable ends, etc.—Write, Kempson and Co., Ltd., Pye Bridge, Alfreton.

Five Hearson 240-egg Incubators. Fourteen Double Compartment 150-Chick Capacity Foster-Mothers. Inspection invited. Offers Wanted for whole or part. — Macauliffe Brothers' Egg Farm, Ham Fields, Ham Common, Surrey.

Hearson 240 Incubator; good condition; £8. Buckeye, 600. Used two seasons only; condition as new; £20. — Gordon, The Laurels, Carterton, Oxon.

PEDIGREE BASKETS

For incubator trays, made of fine wire gauze, to hold six eggs; 6in. square x 2¾ deep, with hinged lid; 3s. 6d. each; six for 18s. 6d. post free. Special sizes made to order.—E. D. G. Appliance Co., Ltd., 31, Alderman's Hill, London, N.13

TO POULTRY FARMERS.

Intensive Poultry House, 106 ft. long, 9 ft. wide, 6 ft. 6 in. high, divided into three separate houses; 42 ¼in. glass windows, 75 inside nest-boxes. Substantially built boarded floors; over 5½ tons timber. Capacity 600/800 fowls. Price on rails £125. —Little Cannons, Epping Uplands, Essex.

SECTIONAL ARMY BUILDINGS,

from 30 ft. x 16 ft. to 150 ft. x 28 ft. in excellent condition, with floors, windows, doors, lined interiors. Fuller particulars, apply—Clayson, Lyminge, Kent.

The "Downside" House has

PERFECT VENTILATION.

See display.

FOX'S TRAP-NEST FRONTS.

Simple, durable, reliable; sample three, 6s.; 21s. dozen, carriage paid.—Fox, Hebron, Colnbrook, Bucks.

APPLIANCES.

FOR SALE.

Phipps' 160 Premier Incubator, as new: hatched up to 88 per cent.; £5 10s.; carriage paid.—Allsworth, Wyselwood, Sandhurst, Berks.

"Uneedit" Mammoth Brooder Fittings, consisting of stove, over 200 feet of piping, and six hovers, with lifting gear; capacity 1,200 chicks; in good order; been little used. Too large for present owner. What offers? —Young, Brett's Hall, Tendring, Essex.

Hearson 240-Egg Incubator; used one season; perfect condition; £12.—Woodroffe P.F., Danbury, Essex.

Glevum Blue Flame Hovers (3); 500 chick size; £3 10s.; good condition; in use all last season. Also Castle Hovers. — Bigland, Beaconsfield.

Stanworth 1,200-Egg Mammoth Incubator; £55; solid oak model; excellent working order and condition. Ready immediate dispatch.—Wendover Dean Farm, Wendover, Bucks.

Soole Giant Incubator, 1,200-egg size; nearly new; in perfect condition: price, £65, cost double. Being sold as poultry discontinued.—Rooke, Brimpton, Berks.

Close-woven Osier Shelter Hurdles, 6ft. long; 25s. dozen, f.o.r.; light, strong, and portable; ideal for chick rearing; any size made to order. — Berwickmere Appliance Agency, Berwick, Sussex.

Sectional Incubator House (Tamlin) for sale; double-walled and packed with sawdust; excellent order, new in 1924. Also One Glevum 100 Incubator, and one Gloucester, 100, both S.T. trays.—Apply, Leigh Brow Poultry Farm, Dedham, Colchester.

INCUBATOR AND BROODER FITTINGS.
Note: Every fitting stocked; complete sets or accessories supplied; lists stamp.—"Myers,' Manufacturers, Cadogan Terrace, Victoria Park, London, E.9.

FOODS.

FOR SALE.

Superior Cockle Grit; 1 cwt., 2s. 9d.; 5 cwt., 12s. 6d.; 10cwt., 22s. 6d.; 1 ton, 40s.; f.o.r. Trade supplied.—Framingham. South Quay, King's Lynn.

"FERTILITY" POULTRY FOODS
For Egg Production. Purest, Cheapest, and Best. Send for price list and samples. —British Fertiliser Co., Ltd., Wenlock Street, Bradford.

THE MISSING LINK.
OUR COMPLETE MINERAL SALTS.
Calcium, Phosphorus, Potassium, Sodium Chloride, Magnesium, &c., &c., 7 lbs. 2s. 6d., post paid; ½ cwt., 8s. 9d.; 1 cwt., 16s. Carriage paid England, Wales.—John Wright (Tunbridge Wells), Ltd.

LIMESTONE GRIT.
Derbyshire Limestone Grit, 3s. cwt.; 50s. per ton, f.o.r.—E. Thornhill, Great Longstone, Derbyshire.

SPICK GRIT.
(Registered Trade Mark).
One shell, grit or stone will not give you perfect results. Spick Grit is scientifically blended and will; 8s. cwt., carriage paid, or all corn dealers, in smaller bags. — Liverine, Limited, Grimsby.

A B GRIT.
SUN-BLEACHED
SHORE SHELL.
SUPERIOR TO AMERICAN OYSTER.
FAR SURPASSES ORDINARY COCKLE.
Why squander your money on oyster grit and perpetuate a popular fallacy. Sunbleach Shell Grit is half the price and better, as analysis by a renowned chemist and careful direct tests and numerous confirmatory testimonials have proved. 5s. 6d. cwt., carriage paid 150 miles, or 3s. cwt., f.o.r. Special Trade quotations, delivery any station, 4, 6, 8-ton lots.
ANDREWS' BRITISH GRITS.
LEYSDOWN, KENT.

MEDICINE.

NO MEDICINE WILL BE REQUIRED
by birds housed in the "Downside." They will keep healthy. See display.

A CERTAIN CURE FOR ROUP.
COST UNDER 1/- PER GALLON.
Why pay more? One of many guaranteed testimonials reads:—"36 birds treated are now perfectly normal; six extra bad cases are gradually yielding to treatment.
YOUR REMEDY CERTAINLY DOES ALL YOU CLAIM FOR IT."
Simple, safe, quick Write for my pamphlet, 1s., post free.
"THE DETECTION, CURE AND PREVENTION OF ROUP."
Save yourself and your birds from ruin.—Severn Storr, The Winnaway Poultry Farm, Harwell, Steventon, Berks.

ROUP. ROUP.
"DIPTH" (Non-Poisonous).
(Registered Trade Mark).
THE NEW AND SURE CURE AND PREVENTIVE for
ROUP, CHICKEN-POX, CANKER AND COLDS IN FOWLS, TURKEYS, PHEASANTS AND PIGEONS.
"Dipth" is a quick cure, no handling of birds necessary, as "Dipth" is simply mixed with meal and fed as a wet mash. Prices, in sealed tins:—Pint, 3s.; Quart, 5s. 3d.; ½-Gal., 9s., Gal., 16s.; 2-Gals., 30s.; 4-Gals., 55s.; 8-Gals., 105s. Carriage paid from:—
JOHN SMART, S.P.B.A.,
"Bonnybrook," Sunbury-on-Thames, Middlesex.

WATER RAT

Roup Paste in tubes for the drinking water. Just squeeze a little into the water, and it cures and prevents roup in fowls; also disinfects the water. The birds can get it on an empty stomach. Easy to carry round the farm. All dealers sell 6d. and 1s. 6d. tubes, or four 1s. 6d. direct, post free, 5s. 6d. — Liverine, Limited, Grimsby.

PUPILS.

Miss Harrison Bell, Sisservernes Farm Welwyn, Hertfordshire (London, 25 miles) Thorough practical and theoretical training on Pedigree Poultry Farm; up-to-date equipment. Girls taught on business lines. Mammoth and Small Incubators. Lectures Examination. Post found. Prospectus free.

Pupils are received and thoroughly trained amidst charming surroundings by Major and Mrs. Disney-Roebuck, on their Modern Pedigree Farm at Hoo Meavy, Yelverton, South Devon. Carpentering taught.

Wanted to place, January, two young men, age 17, on good poultry farm for tuition, Midland Counties preferred. Terms moderate. — Blundell-Williams, Radway, Warwick.

Capt. Collins, Dale Egg Farm, Lawshall, Bury St. Edmunds, offers personal tuition to one keen Pupil. 1,000 pedigree trapnested White Leghorns. Particulars on request.

One or two Vacancies, Kent, only for keen educated Male Pupils, live out. Progressive Pedigree and Commercial Farm: 2,000 head. Premium moderate 6 months, improver, helpful, free position to follow; possible.—Owner, 6, Fairfax Road, Hampstead.

Vacancies for Poultry Pupils. — P. B. Adams, East Franklyns Poultry Farm, Hayward's Heath.

Vacancy for a Pupil Assistant on Commercial Poultry Farm; good opportunity for one who is really keen to learn the methods of a paying business; live out; small premium.—Worters, Uplands Poultry Farm, Rotherfield, Sussex.

Miss Hasler, Frinton-on-Sea, has Vacancy now for Two Pupils on Pedigree Poultry Farm. Thorough practical training: six months or one year.

PUPILS.

Vacancy Pupil. Commercial, Pigs, P
try. Large scale on estate. Most meth
tested. Fullest instruction. No premi
—Langridge, Framingham Pigot, Norw

HOW TO MAKE MONEY
by Wool Farming, price 1s. 3d. The L
Rachel Byng, High Sandhoe, Hexh
Northumberland, has Vacancies for Gen
man or Lady Apprentices on her Ang
Rabbit Wool Farm; 400 rabbits; live c
three months' free training; sho
hours; premium; £5 5s. or weekly
Lovely country, delicious air. Posts fo
for suitable pupils. Can highly rec
mend Lady Pupil to take charge of Ang
Rabbit Farm; board and lodging,
small salary. "How to Make Money
Wool Farming," price 1s. 3d.

PARTNERSHIP.

Poultry and Fur Rabbits. Lady Wan
help increase production; 9-acre farr
Dare, Horsford, Norwich.

Vacancy, through illness, for Partn
batchelor preferred, to join another (a
34) in developing 19-acre farm recen
started Essex, chiefly poultry. Ideal p
tion, good prospects. Capital requi
£1,000.—Box 10, "Eggs," 94, Farncor
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MISCELLANEOUS.

The Finest Quality Light Norfolk Clo
Honey, from my own bees; 7lbs., 11/6;
riage paid. Sample 3d.—E. W. D. Ma
Mattishall, East Dereham, Norfolk.

10/6 to Measure. Breeches or Trous
made from the hardest wearing Cords
Tweeds. Style and fit guaranteed, or c
refunded—Send now for free patterns
measurement form: Hebden Cord
(Dept. 20). Hebden Bridge, Yorks.

FARMS FOR SALE.

Poultry Farm for Sale; 2,000 birds. In
bators, Foster Mothers, etc. Also Bur
low. Local demand for all eggs. Fa
situate between Teddington Bridge
Lockhouses. — Apply, Macauliffe Broth
Egg Farm, Ham Fields, Ham Comm
Surrey.

For Sale, Surrey and Hants Borders
an old-time village, Brick-built and T
Cottage Residence, containing large liv
room, two or three bedrooms, kitch
offices, bathroom (hot and cold water
plies); gas; company's water; garage
store. Paddock of one acre. Near all c
veniences, including motor 'bus ro
Freehold. £845. — Apply, S. H. Germ
Farnham, Surrey 'Phone No. 84 Fa
ham.

Over £20,000 has been spent on one
the most Up-to-Date Commercial, Inten
and Free Range Poultry Farms in
country. First-class retail egg trade w
London. 2,000 birds from the best lay
strains in the country. Fine Mans
House. Good Farmhouse, two Cotta
Equipped throughout with every labo
saving and modern convenience. Offe
for Sale as a whole or in part, owing
owner leaving England, at bargain pri
—Apply, Box 272, "Eggs," 94, Farncou
Street, London, S.E.16.

VALUABLE FREEHOLD POULT
FARM FOR SALE. WELL-KNOW
AND ESTABLISHED. VERY WE
DESIGNED.—Apply, S. PATEY, S
citor, 33, Finsbury Square, E.C.2.

SITUATIONS VACANT.

Can anyone recommend Poultryn
with sound experience, extra-hard work
for Commercial Egg Farm? Must be
cessful rearer and feeder. Good wa
and prospects to suitable man.—Wendo
Dean Farm, Wendover.

Poultryman, married, experienced; g
home: state particulars fully.—Highf
Poultry Farm, Downton, Wilts.

SITUATION VACANT.

Wanted, Poultry Maid for rearing sea- n. Wages 35s., and furnished bungalow. Apply Mrs. Ogilvie, Smartswell, Mere- orth, Nr. Maidstone.

SITUATIONS WANTED.

The Countess of Strathmore is anxious recommend Miss Dunlop as a first-rate oultry Manageress, excellent at rearing, iowing, fattening, and trussing. Very :onomical manager, and most trustworthy id hardworking; she is also a good dairy aid. Write—Miss Dunlop, 15, Lansdown ardens, Muirend, Glasgow.

Poultryman, thoroughly experienced, ıpable taking charge, good hatcher and arer; good references; married.—Bulli- ore, 137, Trafalgar Road, Portslade, ıssex.

Manager, public school, age 23, five years :perience all branches, incubating, rear- g, eggs, and appliance making. Good ıpenter: excellent testimonials. — E. endover Dean, Wendover, Bucks.

Wanted. post as Poultryman, life experi- ıce: would assist in garden or on farm; arried. — S. Gower, Dollyman's Farm, awreth, Nr. Battlesbridge, Essex.

Gentleman, Liverpool resident, well lucated, experienced, desires position as ssistant with refined people; live in pre- rred; might consider small investment entually.—Box 11, "Eggs," 94, Farn- ombe Street, London, S.E.16.

MISCELLANEOUS WANTS.

Wanted One Second Hand 150-size loucester Self-Turning Egg Tray; also Reliable Brooder Thermometers. — ickinson, Llandefaelog, Brecon.

Wanted. Two Original Radiant Blue- lame Hovers, Model H.1. 500 chick size, ithout canopy. — Dickinson, 6, Windsor venue, Gosforth, Northumberland.

Wanted, 800 Aylesbury Duck Eggs for itting. Unfertiles must be replaced. uote lowest price delivered to Royston tation, L. & N.E. Railway.—A. R. Cowell, t. Chishall, Royston, Herts.

Classified Advertisements.

(PREPAID RATES.)

1d. per word—minimum charge, 1s. 0d.; 13 insertions at price of 12. Bold headlines inserted at an extra charge per insertion according to size as below:—

DAY-OLD CHICKS,	per line, extra 9d.
DAY-OLD CHICKS,	„ „ 1s.
DAY-OLD CHICKS	„ „ 1/6

The number of letters, punctuations and spaces between words should be totalled, when the following table will be of assistance:—

9d. size allows for Thirty-one to one line.
1/- size allows for Twenty-seven to one line.
1/6 size allows for Twenty-one to one line.

When the remittance does not cover the size selected, a smaller corresponding size type will be used.

Insertion constitutes acknowledgment of remittance in the case of pre-paid advertisements. For a series of 13 insertions or more, a receipt is forwarded.

"A New Departure."

Fowlpride Foods, Birkenhead,

will be pleased to supply readers of "EGGS" with Poultry Foods in cwt. lots at wholesale prices.

Yellow Maize Grits (All grades) ...	11/6
„ „ **Meal** (Finest) ...	11/6
Meat and Bone Meal	13 9
S.G.O.	13/6
Clipped Oats, White English	12/3
Maize Germ Meal	10/6
Pinhead Oatmeal	16 9
Coarse Cut Wheat (Fine, **6d.** extra)	16/3
Hard (No. 6 Manitoba) Poultry Wheat	12/3
Colonial Alfalfa	13/-

Gross weights, sacks free. F.O.R. Liverpool district. 56-lb lots half above prices plus 3d.

Stamped addressed envelopes with enquiries; addressed labels and cash with orders. Samples 6d. Orders despatched every Wednesday.

PULLETS from 8/6
COCKERELS „ 15/-

Rhode Island Reds
White Leghorns
Light Sussex

Bred from highly fecund trap-nested ancestors for : EGG PRODUCTION ;

ALDERSON SMITH
(Farms), Ltd.,
BRAUNSTON nr. RUGBY

"SPECIAL" LIME-STONE GRIT.

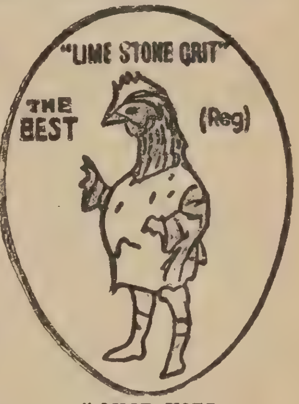
3/3 cwt., 60/- ton.

Sole Manufacturers—

E. A. Pittam
Dock Road,
Garston,
LIVERPOOL.

Write for samples and quotations.

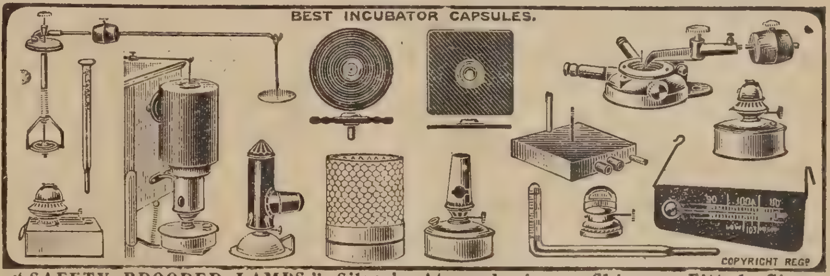
Oyster shell and flint grit a back number.



"ONCE USED ALWAYS USED."

Best Incubator Fittings.

'e are Actual Manufacturers--See our new Illustrated List tamps). Note.—Our Capsules are guaranteed (2 years) or eplaced FREE. We have 35 years' experience with Incu- ator and Brooder Fittings. Every fitting stocked. Capsules atent pattern), round pegged, 2/6 and 3/-; best square flat apsules 2/6 and 3/- each; 4in. (Double Expansion) Mammoth apsules, 5/3 each (state if Hot-air or Hot-water Incubator.) nglish accurate Incubator Thermometers, 6in. straight, 2/9, n. 3/-, special 10in. 3/6. best L shape 3/6, metal scale (hot- ir), hanging, 3/3. Brass Regulator Sets (with Capsule com- lete), 9/6, automatic Gas Valves, complete, 9/6, Gas overnors (patent), 4/6, Bunsen Burners 2/3, Egg Testing amps 5/9. Postage free. Copper Tanks, Hot-Air Heaters, over Heat Drums, all Burners, Wicks, Eyelets, Felts, Can- as Slag Wool, every accessory, etc. Important.—We are ie Sole Inventors of the Improved "Safety Brooder Lamps" ith the Dome-Top Containers and Screw Caps. Let your rder be placed with the Firm with 35 years' reputation. ll Goods Despatched same Day as orders received.



"SAFETY BROODER LAMPS," Silver's Atmospheric or Chimney Fitted. Sizes: 60 chick, 100 chick, 150 chick. Prices: (4/9 and 5/9), (6/9 and 7/9), (8/6 and 9/6). Chicken Protection Guards, 1/6, 2/- and 2/6 each. Brooder Thermometers (Rearing Stages), 1st, 2nd, 3rd and 4th weeks, 2/6 and 3/- each. Over 60 different Lamps and Burners stocked for Incubators and Brooders. Immediate Despatch.

MYERS, Manufacturers (Fittings Dept.), 33, Cadogan Terrace, Victoria Park, LONDON, E.9. (Estab. 1875.)

F. Bostock Smith
Pedigree Utility Poultry

My Mating List is worth money to you.

1926 List now ready, Free on Request.

"Heaselands," Barham, Canterbury, Kent.

WE HAVE EXHIBITED AT 8 SHOWS THIS SEASON ONLY

OUR AWARDS COMPRISE 8 Cups Medals and Specials, 13 Firsts, 16 Seconds, and 12 Thirds; in BOTH UTILITY and EXHIBITION Classes.

ALL our WINNERS, and more birds of EQUAL MERIT are now in our BREEDING PENS; thus customers have eggs from exactly the same breeding pens as ourselves. Over 50 mated breeding pens and 500 trapnested hens daily recorded.

SITTINGS AND DAY-OLD CHICKS supplied at ONCE.

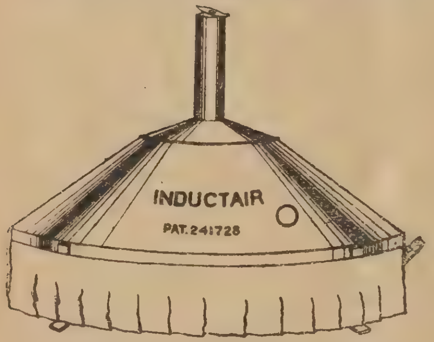
Black Leghorns.	White Orpington.
White Leghorns.	Rhode Island Red.
White Wyandottes.	Light Sussex.
White Runner Ducks.	Indian Game.
Buff Orpington.	M.B. Turkeys.
Blue Orpington.	

OUR PRICE per Sitting: 7/6, 12/6 & 15/-.

Day-Old Chicks: 15/-, 25/- & 30/- per doz.

J. H. ASHTON BAGLEY,
F.N.U.P.S., P.C., S.P.B.A.,
DEAN POULTRY FARM,
KINGSLEY, BORDON, HANTS.
'Phone: Bordon 99.

OUR GUARANTEE:—
"SATISFACTION OR MONEY RETURNED."



The Hover that is Making Converts.

Read what a new customer says:—

December 12th, 1925.

The Induction Hover is working quite satisfactorily. Owing to the extreme cold we have been able to give this Hover a severe test in our brooder house. We should like 15 more like it.

A Trial Order will convert YOU.

Sole Address:—

M. WEBSTER,
BROADLEY LAITH, MOUNT TABOR,
HALIFAX.

WIRE NETTING.

Orders under £1 carriage paid 1/- extra.
£1 and over carriage paid 1/6 extra.

Mesh.	G.	1ft.	2ft.	3ft.	4ft.	5ft.	6ft.
3in.	19	—	—	7/6	9/9	12/-	14/9
2in.	19	—	7/6	10/-	13/6	17/-	20/-
1in.	20	6/10	12/3	17/6	per 50yd. rolls.		

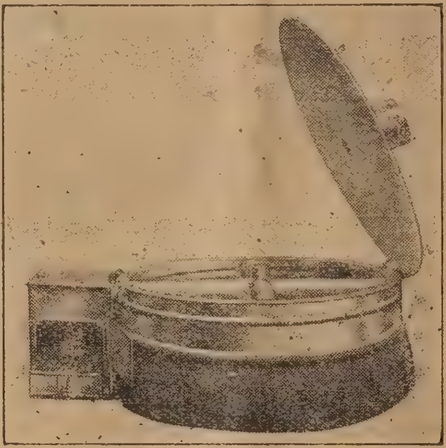
RELIANCE WIRE CO., Dept. E.,
LONG EATON, NOTTS.

Drew, Erwood's Three Specialities

SUPER HOVER. **IMPROVED WALL FOUNTAIN.** **DRY MASH HOPPER.**

Super Hover.

4th Successful Season.



PRICES:

60 CHICK,
£2 . 0 . 0

100 CHICK,
£2 . 15 . 0

200 CHICK,
£4 . 0 . 0

Heated by oil or gas outside, thus NO OXYGEN IS CONSUMED by the burner. HINGED LID, giving FULL VIEW of chicks when required. This lid is also fitted with an adjustable screw for regulating the heat and ventilation. COPPER LAMP with Best Burner. FLOOR SPACE free from any obstruction. OBSERVATION WINDOW in lamp box for viewing the lamp without getting on the ground. Protector Guards can be supplied for the above at 7/6, 10/-, 12/6 extra respectively. Carriage Paid Crate and packing FREE, 5 per cent. extra to Ireland, Scotland, and Channel Islands.

IMPROVED WALL OR STANDING FOUNTAIN.

Latest idea whereby the fowls can DRINK FROM THREE SIDES. The Gallon size has 22 INCHES OF DRINKING SPACE, and the two gallon has 33 INCHES. These fountains can be fitted with a sanitary cover for 1/- extra.

Prices: One gall., 4/6; Two gall., 6/6. Carriage paid.

THE METAL ARK DRY MASH HOPPER.

Can be completely closed when not in use, thus making it vermin-proof, weather-proof. NO CLOGGING, FOOD ALWAYS AVAILABLE.

Small size, holding about 18 lbs., 10/6; Large size, holding about 40 lbs., 20/- each. Carriage Paid.

Write for Illustrated List,

DREW, ERWOOD & Co., Herbert Rd., Plumstead, S.E.18.

Death to the Red Mite!

"Sidol" follows him into the wood and kills him. It also hardens the timber and enables it to give years of extra wear. From 2/3 per qt. tin to 3/- per gall. in 40-gall. barrels. In standard shades of Nut Brown. Also in Green. Stocked by Ironmongers & Colourmen.

"SIDOL" WOOD PRESERVATIVE

on the Chicken Run means Eggs in your Basket.

Write for Booklet to Dept. 31

D. ANDERSON & SON LTD.
(Also makers of "Stonifles" roofing)
Park Road Works, Stretford, Manchester; Roach Road Works, Old Ford, London, E.; and at Belfast.

S.1

A REMINDER!

COME!

Whatever you do don't forget to book January 7th, 8th and 9th for your visit to the Midland Poultry Festival at Bingley Hall, Birmingham.
Organised by the Midland Federation of Feather and Fur Societies in conjunction with the "Birmingham Mail," this Festival is, indeed, the Poultry Breeders' Mecca. Apart from the "Elite of the Industry" literally tens of thousands of "backyarders" will visit the Festival, which is being extensively advertised.

MIDLAND POULTRY FESTIVAL,
BINGLEY HALL, BIRMINGHAM,
JANUARY 7, 8 and 9.

Come! Meet your old friend and make the acquaintance of new ones . . . . and there's a pile of business to be done if you have anything to sell—eggs for hatching and day-old chicks for next season will be in great demand. There's over £600 in Challenge Cups and Prize Money; there's lectures and demonstrations by leading experts of the day. There is a complete exhibition of every modern device that makes for profitable poultry-keeping, and there's a continuous performance each day of the latest cinematograph films, fascinatingly depicting every branch of poultry farming.
Midland and Northern members of the S.P.B.A. are particularly invited to visit the Midland Festival and meet Mr. Tom Newman in the S.P.B.A. Instructional Stand there.

DON'T FORGET!

ALBERT H. BRAIN,
Hon. Organising Secretary,
63, OLD MEETING ST., WEST BROMWICH.

YET ANOTHER!

HERE!

Here is yet **another** remarkable testimony to the efficacy of Visol, just to hand from one of South Africa's largest and most successful poultry breeders. You have read what Visol has done, and is constantly doing, throughout the length and breadth of England for its largest poultry magnates—TOOVEY, WELCH, MEEKINGS, DOWDEN, NAPIER, BRADY, BARRON, ARDERN, etc., etc.—now read how they appreciate Visol overseas:—

"YOUR DISCOVERY IS WONDERFUL AND SHOULD POSITIVELY REVOLUTIONISE POULTRY FARMING."

Hilversum Poultry Farm,
Cedarmont, Transvaal,
A. H. Brain, Esq. South Africa,
Dear Sir, 1st. Dec., 1925.

Re Visol. I have now given Visol treatment an exhaustive test on this farm, and in so far as Dry, Wet and Nutritional Roup is concerned, can unhesitatingly confirm all you claim for it. To my mind your discovery is wonderful, and should positively revolutionise poultry farming.

The amount it will save commercial and other poultry farmers in the hatching of surplus chickens to meet the contingency of loss by roup will in itself reach a tremendous figure annually, apart from the question of vitality and better constitution of birds will attain by reason of being free from this scourge.

Yours faithfully,
(Sgd.) J. R. ADENDORFF.

GET YOUR SUPPLY NOW—Winter and common sense demand it. Ten gallons, £5. Five gallons, £2 17s. 6d. Wooden Casks 15/- extra, returnable. One gallon, 15/-, Stone jar included. Carriage Paid in England and to English Port only. Smaller bottles from Corn Dealers.

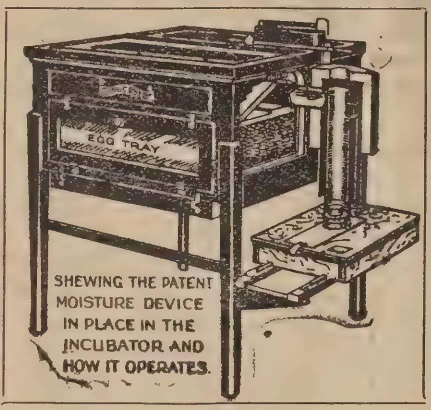
Visol

VISOL LABORATORIES, WEST BROMWICH.

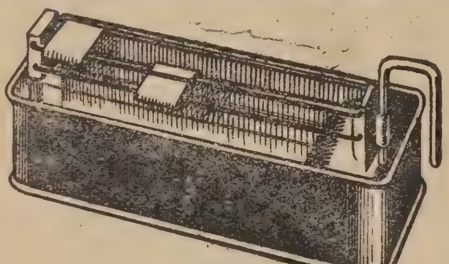
THE "GLOUCESTER" INCUBATOR

THE
MOST POWERFUL HATCHER IN THE WORLD

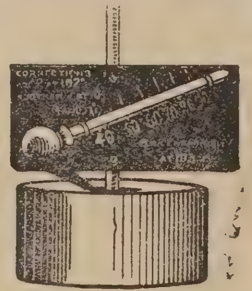
The "GLOUCESTER" INCUBATOR.


EGG TRAY
SHEWING THE PATENT MOISTURE DEVICE IN PLACE IN THE INCUBATOR AND HOW IT OPERATES.

The 'Gloucester' Moisture Device.



The 'Gloucester' Hygrometer.



THE THEME OF THE 'GLOUCESTER' IS DEPENDABILITY.

Coupled with the New "Gloucester" Invention, which settles the question of Humidity in Incubators, the "Gloucester" offers you a Hatching Service impossible of attainment in any other Hot-Air Machine in the World.

Until you have had the thrill of using it, you cannot realise its possibilities. There is no other like the "Gloucester"—no other Hatching Method enjoys so many advantages. To realise these every reader should straightway request full details, which are supplied Post Free, and in the "Book of the Gloucester" you get just the information you need.

The "Gloucester" Guarantee protects every buyer from risk in purchase.

The "GLOUCESTER" BROODER

Provides perfection in chick rearing not obtainable in any other direction. This appliance broods chicks better than any hen can, and they thrive at a more rapid rate also. Heating and Ventilation are perfect, and the fittings and materials are all first-class quality, made to last for many years good service

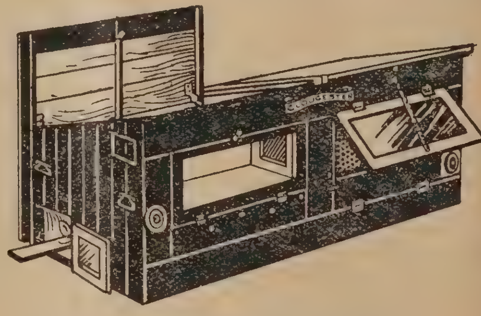
Prices of:

Moisture Device	7s. 6d.
Hygrometer	4s. 0d.
Post paid, 6d. extra.	
Both sent Post Paid ...	12s. 0d.
If ordered with Incubator	10s. 6d.

PRICES OF THE "GLOUCESTER."

No. 0	45 Egg	Oil ...	£5 15 0
No. 1	70 „	or ...	6 15 0
No. 2	100 „	Gas ...	7 15 0
No. 3	150 „	„ ...	8 10 0
No. 4	250 „	„ ...	11 10 0
No. 5	390 „	„ ...	15 0 0

Carriage Paid. Crates Free.
Irish Orders 5 per cent. extra.



PRICES—"GLOUCESTER" BROODER.

1.	76 Chick Size	£5 0 0
2.	100 „ „	6 0 0
3.	150 „ „	7 0 0

Incubators and Brooders are Carriage Paid. To Ireland, add 5 per cent.

For Easy Payment Terms and London Show Rooms: The Inter-Trading Corporation, Ltd., 45, Bedford Row, London, W.C.

INCUBATOR ELECTRICALLY LIGHTED

Immediate Despatch. No one is kept waiting.

THE GLOUCESTER
INCUBATOR Co., Ltd.,
Woodchester Works, No. 5,
STROUD,——GLOS.

Send your address for the Illustrated Catalogue.

20 YEARS SERVICE

Fayremead Estate
POULTRY FARM.
Season 1926.
PRICE LIST AND MATINGS
Post Free on application.

WHITE WYANDOTTES,
WHITE LEGHORNS, and
RHODE ISLAND REDS.

Capt. W. TURTON, Resident Director,
Fayremead Farm Products, Ltd.,
ENSBURY, BOURNEMOUTH.

ANCONAS, 1st, Gold Medal,
"Feathered World" Test
W. WYANDOTTES, 2nd Scottish Test.
K.-C. DUCKS, 4th Scottish Test.
Breeds Kept: W.W., R.I.R., L.S., W.Br.L., A., I.R. and K.-C. Ducks.
STOCK BIRDS, BREEDING PENS,
LARGE EGG STRAIN.
S. E. S. BURNETT, S.P.B.A.
Berryhill Poultry Farm, Arbroath.

W. Leghorns, W. Wyandottes
Rhode I. Reds, Barnevelders

HATCHING EGGS, 15s. 6d., 10s. 6d., 7s. 6d. per dozen. (Day-Olds Double).

10 per cent discount on orders of 100 or over.

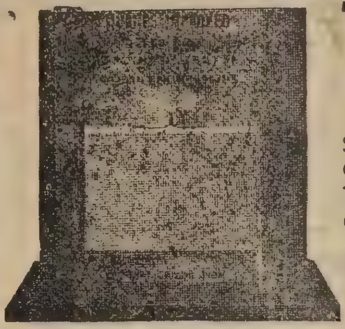
COCKERELS and Individually-Bred Stock.
Prices on Application.

Our Breeders are Noted for Large Eggs, Stamina and Record.

See Our Pens at last year's Laying Tests. For Spring Chicken. We have available now Hatching Eggs (Heavy Breeds) at 6s. 6d. per dozen, £2 10s. per 100 or over.

DALDY & JACKSON,
S.P.B.A.,
Choda Poultry Farm,
CRAWLEY, — SUSSEX.

The ALVESTON "Improved"
Trap-Nest Front



as supplied to the
MINISTRY OF AGRICULTURE and
THE LEADING COLLEGES.

Single (sample) ... 3/- each
One Dozen ... 2/9 ,,
Three Dozen ... 2/8 ,,

Quotations for larger quantities and further particulars from
OSCAR C. HUGHES,
Alveston Poultry Farm,
STRATFORD-ON-AVON.

All prices quoted are strictly cash with order.

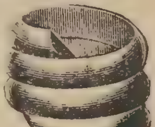
White Leghorns Only.

"GLOSTER PROMISE."
Gold Medal, 5 Counties Laying Test.
Record to date 553—2 years.
Dam, "Pensford Promise," 590—2 years.

We are now Booking Sittings from our Long-distance Layers. Lowest Records 200. All Breeding Stock on virgin land, and housed under ideal conditions on the new farm.

ILLUSTRATED CATALOGUE.
Individual Cockerels still for Sale.
Our Strain has—
Size of Body, Size of Egg, Beauty of Type.
combined with heavy production.
THE MISSES RANSFORD,
PERSEVERANCE POULTRY FARM,
FINCHAMPSTEAD, BERKS.

DOWELL'S POULTRY RINGS, sizes 5, 6, 7, etc. Celluloid Spirals, extra strong quality, in 12 brilliant colours. Prices, 500, 14/-, 300 9/- 150 5/-, 100 3/6, 50 2/-, 25 1/3. **"Flat Bands"** in 20 colours, i.e., 10 Plain and 10 Striped. 500 16/-. 300 10/6, 150 5/6, 100 4/-, 50 2/3, 25 1/3. **All post paid. For Chicken Rings and Wing Bands, see** our Special List.



Aluminium "Embossed" Numbered Rings, adjustable or not Prices, 500 13/6, 300 8/6, 150 4/6, 100 3/-, 50 1/9, 25 1/-. With date also, 4d. per 100 extra. **Poultry Appliances and Utensils of every description.** Rings, fountains "ACME." Brooders, mash hoppers, guarded feeding troughs, bottle fountains, food cups, toe punches, egg-stamps, scrapers, egg-testers, thermometers, capsules, nest eggs, judging sticks, etc., at lowest prices.

Illustrated Lists of all Rings and Appliances free. Special to the Trade. Factors, etc., send for samples, etc. Big Discounts.

"THE OLD FIRM," F. W. DOWELL,
Mansfield Road, ASTON, BIRMINGHAM

When Answering Advertisements, please Mention "EGGS."

F. Bostock Smith
Pedigree Utility Poultry

Black Leghorns, White Wyandottes, Rhode Island Reds, Light Sussex, White Leghorns, Black Mendels.

See My Mating List First!

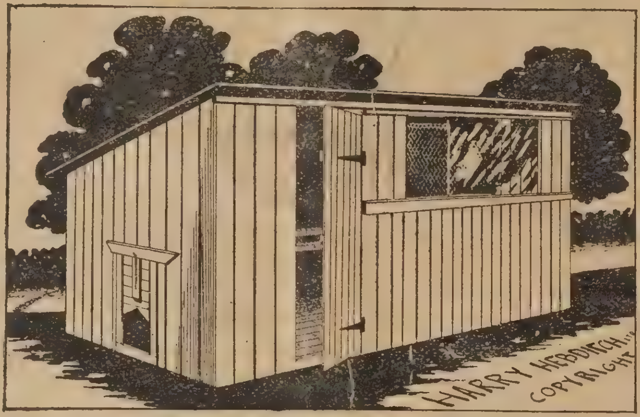
Before you make any decision on the purchase of sittings, see what I offer. Past results have proved the quality of my sittings, and my 1926 list will show that my prices are right, too. Get your copy now.

"Heaselands," Barham, Canterbury, Kent.

SECURE THIS VERY WONDERFUL BARGAIN

The "HERCULES" Poultry House.

Size: 6ft. long, 4ft. wide, 4ft. high.



This is a bargain indeed, and compared with the losses which it saves the poultry-keeper its cost is ridiculous. It is made of Red Deal. The boards used are ⅝in., tongued and grooved, V-jointed and planed. The frame is of 2in. x 1in. Red Deal; the two perches are 2in. x 1½in.; it is provided with strongly hinged door; sliding hen-door and wire-netted window with sliding glass, as per illustration. The House is sent in sections with strong screws for erecting.

PRICE 37/6. FLOORS 9/- Extra.

3 Houses for £5 10s. 6d.; 6 Houses for £11 1s. 0d.; 12 Houses for £22 2s. 0d.

CARRIAGE PAID IN ENGLAND & WALES. Prompt despatch.

We immerse the whole House in Preserolium for 2/- extra.

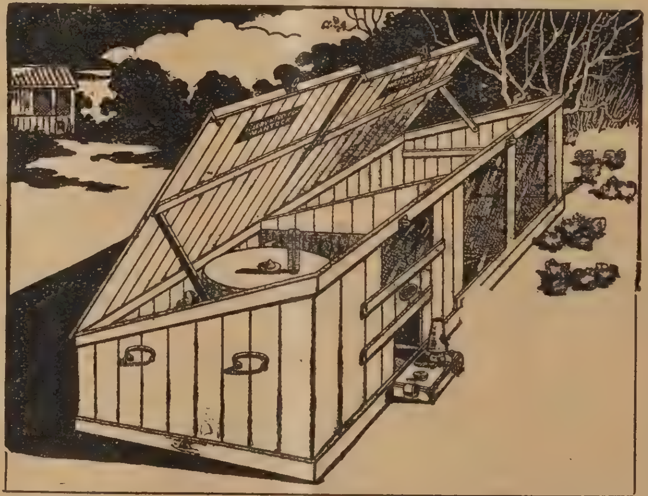
HEBDITCH
OFFERS A
☞ 6 x 4 x 4 ft.
RED DEAL
POULTRY HOUSE
AT
37/6
CARRIAGE PAID.

Send for the Illustrated Free Catalogue of all kinds of Poultry Appliances.

MANY EFFORTS HAVE BEEN MADE BY MANY PEOPLE TO PRODUCE A FOSTER MOTHER AS EXCELLENT AS THE "LORNA DOONE," BUT THE "LORNA DOONE" STILL HOLDS THE FIELD AS THE BEST OF ALL REARERS

The "LORNA DOONE" Foster Mother.

THE QUEEN OF ALL THE FOSTER MOTHERS AND THE LEADING CHICK REARER OF THE DAY.
WILL RAISE EVERY CHICK TO PERFECTION.



Look at the sketch and notice the insulated lamp, the glass window (movable glass), the thermometer, revolving hover, central partition and raisable roof.

No. 1 is 4ft. long, 2ft. wide, for 60 to 70 Chicks. PRICE: £3 18 0.
No. 2 is 6½ft. long, 3ft. wide, for 100 Chicks. PRICE: £5 12 6.

The "LORNA DOONE" makes chick rearing a real pleasure. Both sizes are painted two coats of good oil paint, and the roof covered with thick felt. Carriage paid to any station in England and Wales. Prompt despatch.

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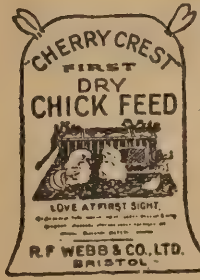

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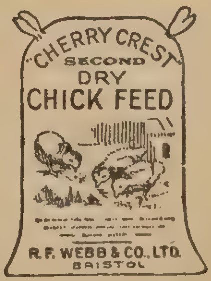

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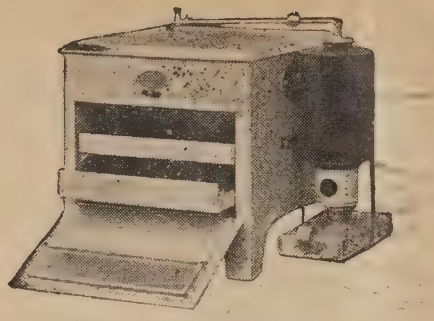

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IS BACKED BY THE LARGE NUMBER OF LETTERS GIVING TO 100 PER CENT. HATCHES, LETTERS WHICH CAN BE SEE AT MY OFFICE AT ANY TIME.

THOSE WHO WISH TO SEE THE MACHINES RUNNING CAN D SO AT MY FARM—12,150 MACHINES NOW AT WORK.

25 Eggs, **£3**; 50 Eggs, **£4**; 100 Eggs, **£5 5**; 150 Eggs, **£6 2**
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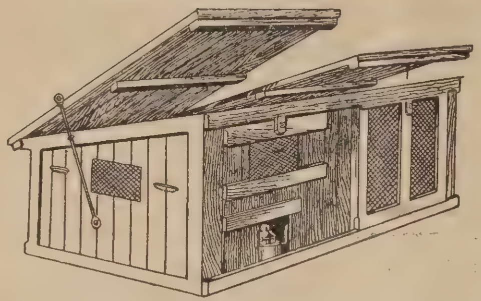

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No. 2, 4ft. x 2ft., 50 Chicks, creosoted outside. £3 17s. 6d. each.
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100-150 Chick, **£2 10s. 0d.**; Three to Six at **£2 9s. 0d.** each; Seven upwards, **£2 8s. 0d.** each; 50 to 70 Chicks, **£2 4s. 0d.**

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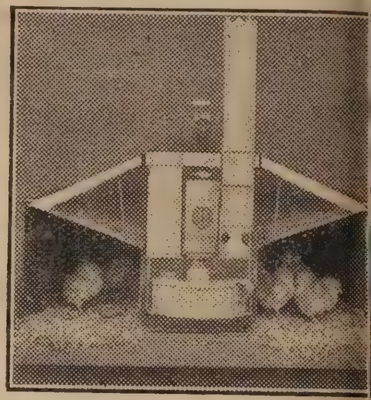

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Having secured a number of cheap 5gal. drums, I am prepared until exhausted to supply 5gal. Refined Creosote, Drum included.

For 11/ only. Carriage Forward.

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Having now increased my contract f these I shall be able to give mo prompt despatch. Approx. 17½in. x 7½i

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4, 13/6; 8, £1 4s. 6d.; 12, £1 16s. 0d.

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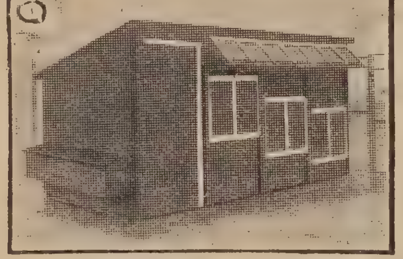

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Also perch and dropping board.

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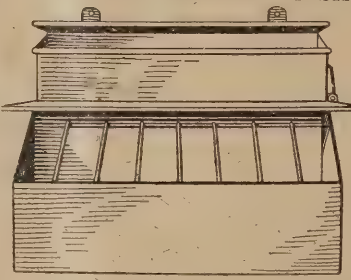

12in.			
1	3	6	12
10/-	26/-	50/-	5
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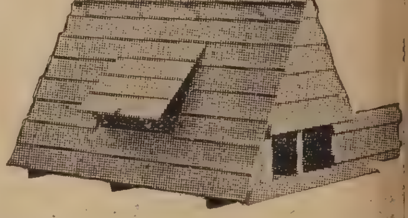

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No. 2.	12ft.	8ft.	7½ft.	£10 10 0	£2 10 0
No 3.	15ft.	10ft.	8½ft.	£15 17 6	£5 2 6

Price includes Dropping Board and Perches full length of House. Made by practical workmen in sections of best ¾in. T. and G. Boards on planed heavy framework, inside shutters behind wire netting. Attendant's door with strong hinges, complete with lock bolts. Ready for easy erection. Carriage paid England and Wales 5 per cent. extra Channel Islands and Scotland. Terms—Cash with order.

Note that all my houses are made of ¾ boards, not ½, and all spars are planed all round.

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Invite every reader of "Eggs," who can do so, to visit their farm at St. Mary Cray to inspect their ma stock, which is this season ahead of any previous years, and, having retained some of their 1925 matin and having a number of entirely unrelated ones in each of their breeds, they are now ready to supply b old and new customers with the finest value obtainable in each of the following breeds:—

RELIABLE EGGS FOR HATCHING AND REARABLE DAY-OLD CHICKS from their reliable strains which represent many y of selective breeding of typical birds and very fine layers are now being sold to old and new customers, and for outstanding value t are none to equal them.

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CHALLENGE WHITE WYANDOTTES.—Description of Matings:—Class I. stock consists of hens bred from 220-235 egg hens m to cocks from 243-246 egg hens. Eggs **12/6** doz., **£5** per 100. Chicks **21/-** doz., **£8 8s.** per 100. Class II. matings are represented by bred from 240-249 egg hens mated to cocks from 253-258 egg hens. Eggs **15/-** doz., **£6** per 100. Chicks **25/-** doz., **£10** per Class III. stock is formed from all their heaviest layers, hens bred from 263-269 egg hens, mated to cocks from 273-275 egg hens. **21/-** doz., **£7 7s.** per 100. Chicks **35/-** doz., **£12 12s.** per 100.

RHODE ISLAND REDS and LIGHT SUSSEX.—Description of Matings:—Class I. matings in this breed are hens from 212 egg hens mated to cocks from hen which produced 226 eggs in her first year. Eggs **12/6** doz., **£5** per 100. Chicks **21/-** doz., **£8 8s.** 100. Class II. consists of hens from 223-241 egg hens and cocks bred from 243-246 egg hens. Eggs **15/-** doz., **£6** per 100. Chicks doz., **£10** per 100. Class III. stock consists of hens bred from 256-267 egg hens mated to cocks from 270-271 egg hens. Eggs **21/-** **£7 7s.** per 100. Chicks **35/-** doz., **£12 12s.** per 100.

BUFF ORPINGTONS.—Their matings for this season in this breed are:—(A) Hens which have laid from 220-235 eggs each m to cocks from 240-242 egg hens. Eggs **15/-** doz., **£6** per 100. Chicks **25/-** doz., **£10** per 100. (B) Breeding stock, consisting of which have laid 241-252 eggs in their first year mated to cocks from 258-260 egg hens. Eggs **21/-** doz., **£7 7s.** per 100. Chicks **35/-** **£12 12s.** per 100.

PREMIER BLACK LEGHORNS and IDEAL WHITE LEGHORNS.—Descriptions of Matings:—Class I. matings comprise 238 egg hens mated to cocks from 244-249 egg hens. Class II. pens consist of 240-256 egg hens mated to cocks from 262 and 264 egg Class III. pens contain their 261,276 egg hens mated to cocks from 282 and 284 egg hens. **Alternative Matings:**—Ia. 223-231 egg mated to cocks from 242-247 egg hens. IIa. 243-255 egg hens, mated to cocks from 259-265 egg hens. IIIa. 263-271 egg hens, m to cocks from 279-282 egg hens. They are retaining two flocks in each class in both varieties (exactly the same birds as eggs supplied from last season as one customer has already bespoken a large number of chicks from Classes II. and II. on account of egg yield of early 1925 Pullets having shown the earning capacity of these matings. These are as follows:—Class I. hens have re of 215-240 eggs first year mated to cocks from 245-249 egg hens. Class II. hens are all producers of from 247-253 eggs mated to from 261-265 egg hens. Class III. hens have laid from 262-283 eggs, mated to cocks from 289-296 egg hens. **Alternative Matings (Wh** Ia. 220-235 egg hens mated to cocks from 247-250 hens. IIa. 241-253 egg hens mated to cocks from 263-269 egg hens. IIIa. 273-281 hens mated to cocks from 292 and 294 egg hens.

PRICES FOR PREMIER BLACK AND IDEAL WHITE LEGHORNS.—Class I. and Ia.—Eggs **7/6** doz., **£3** per 100. Chicks doz., **£5** per 100. Class II. and IIa.—Eggs **10/6** doz., **£4** per 100. Chicks **15/-** doz., **£6** per 100. Class III. and IIIa.—Eggs **15/-** **£5** per 100. Chicks **21/-** doz., **£8** per 100. Commercial orders for 500 Class III. White Leghorn Chicks will be supplied for **£7 7s.** per for those who book ahead. The prices quoted herewith for the **best** Leghorns obtainable are only possible on account of William Cook Sons' increased production of their valuable strain of these varieties of this breed.

MIXED HEAVIES.—Their mixed heavy chicks at 15/- per dozen—£3 for 50—£6 for 100—are exceptionally fine value, and are ordered well ahead by people who want to save the pullets for breeding purposes and kill a good many of the cockerels off. They the chicks left over after executing orders for definite breeds and as often consist of Class III. chicks as of Classes I. and II. selection of breeds must be left to them. Where customers require two breeds of chicks or eggs in one order, they are gladly supp Hatching dates for the majority of breeds: January 1st, 8th, 12th, 15th, 19th, 22nd, 26th, 29th, and onwards.

Safe Delivery Guaranteed to all stations. **For Prices of Stock, kindly send a p.c.**

Their Telephone Number now is ORPINGTON 7, in place of Cray 7—but it is important that readers should note this is the only me of Orpington to be made in communicating with them.

St. Mary Cray is only 14 miles from London (Victoria, Holborn and St. Paul's); Southern Railway, S.E. and C.R. Section. Th firm have only one address, viz.:

ST. MARY CRAY, KENT. (Telephone: ORPINGTON 7.)

No business whatever transacted on Sundays, but farm is open all Saturday. Those poultry-keepers who want to see the largest most modern poultry farm in England should visit St. Mary Cray any week-day, including Saturday afternoon.

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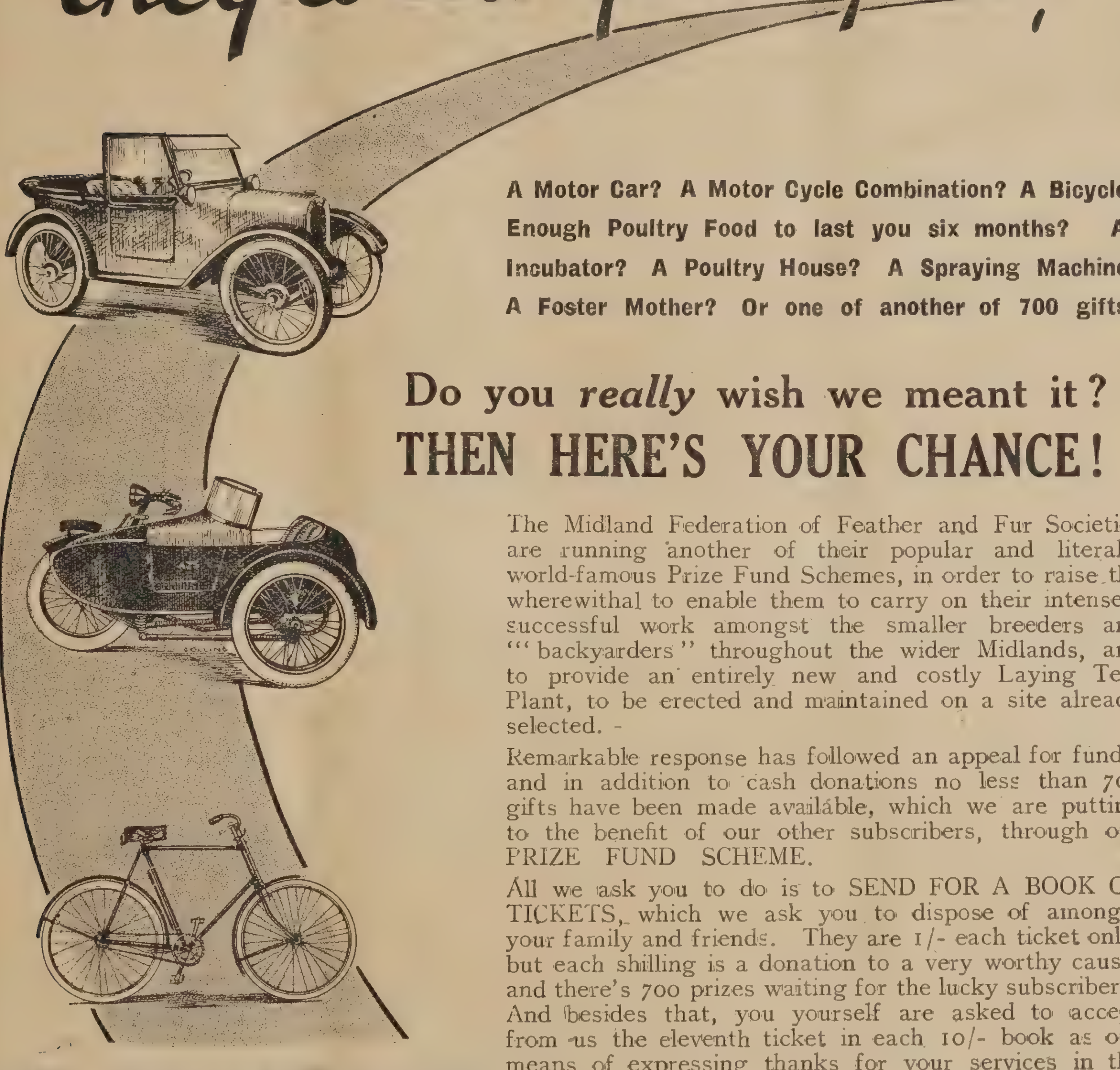
Which will you have— they're All quite free!



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Do you *really* wish we meant it?

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Remarkable response has followed an appeal for funds, and in addition to cash donations no less than 700 gifts have been made available, which we are putting to the benefit of our other subscribers, through our PRIZE FUND SCHEME.

All we ask you to do is to SEND FOR A BOOK OF TICKETS, which we ask you to dispose of amongst your family and friends. They are 1/- each ticket only, but each shilling is a donation to a very worthy cause, and there's 700 prizes waiting for the lucky subscribers! And besides that, you yourself are asked to accept from us the eleventh ticket in each 10/- book as our means of expressing thanks for your services in the cause.

The Federation are running their Annual Midland Poultry Festival in Bingley Hall, Birmingham, on January 7th, 8th and 9th next, and the organisers hope to meet you there—but in the meantime HELP YOURSELF AND A GOOD CAUSE by sending **(without any money, of course)** for a book of subscription receipt tickets.

SEND FOR THAT BOOK OF TICKETS NOW

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Honorary Organising Secretary.

Midland Federation of Feather and Fur Societies, 63, Old Meeting Street : : : West Bromwich.

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VENTILATION SHAFTS

(for which a provisional Patent has been granted)

which allow a current of fresh air to continually circulate through the whole house and the foul air to escape. These shafts are so constructed that, although the house is always

FRESH AND AIRY, THERE IS ABSOLUTELY NO DRAUGHT.

In other words, they give

PERFECT VENTILATION.

Although airy the house keeps warm, so besides make an excellent laying house, it is **AN IDEAL BROODER HOUSE.** It is moderate in price. Rat-proof, Fire-proof. Parasites will not live in it. Many other special features are detailed in my Illustrated Price List, which I shall have pleasure in forwarding post free on application.

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BEST QUALITY AT LOWEST PRICES.

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THE ORIGINAL DOCUMENTS FROM THIS MAN, TOGETHER WITH HIS PERMISSION FOR US TO PUBLISH HIS LETTER, HAVE BEEN SENT TO MR. TOM NEWMAN. FURTHER COMMENT SEEMS UNNECESSARY :—

"Dear Sirs,—Many thanks for cheque. The prices were very satisfactory. I have previously sent consignments of boilers to '———,' '————,' and have invariably been 'twisted' on the weights. I think this is the experience of many others in this industry. After dealing with you, I shall certainly not send to ———. I regret I have not more birds for the pot, having disposed of some 500 during the last month. You would have had the lot had I known of the existence of your Firm before.

Yours faithfully, —————————."

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LIVE CRATES FOR HENS, CHICKENS, AND DUCKS SUPPLIED, CARRIAGE PAID.
SENDERS' CRATES RETURNED SAME DAY AS RECEIVED. CHEQUES AND A/cs DAILY.

EGGS FOR HATCHING AND DAY-OLD CHICKS.

From all my Pure Breeds as below, and Cross Eggs for TABLE CHICKENS.

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Black Minorcas,
White Leghorns (Padman).
S.C. Rhode Island Reds.
Barred Plymouth Rocks Sired by Grandsons of CANADIAN PEN Show at Barcelona.
Light Sussex. Hatching Eggs and Day-Old Chicks.

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Championship Cup and Silver Medal, National Laying Test, Bentley, 1924-25
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U.P.F COOKED MEAL

At the request of a large number of Poultry Keepers who now favour the Dry Mash system of feeding, we have introduced U.P.F. in Meal form. This product is known as U.P.F. Cooked Meal, guaranteed to be absolutely pure and consisting only of selected, cooked grains, with a 100% feeding value. We recommend the use of U.P.F. Cooked Meal as a foundation to the Dry Mash on a 50/50 basis—see recipe alongside

A New Recipe

As a basis for a Dry Mash we recommend 50 per cent. U.P.F. COOKED MEAL, the suggested additions to make a really excellent complete mash being:—

25% Sussex Ground Oats
10% Clover Meal
10% Meat, Bone or Fish Meal
5% Dry Yeast

adding ½ lb. granulated charcoal to every 10 lbs. of mixed mash.

Prices from your dealer	
112 lbs.	18/-
56 "	9/3
14 "	2/6
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FREE SAMPLE

For further particulars and a sample of U.P.F. Cooked Meal, write at once to Uveco Cereals Ltd., Cunard Building, Liverpool, stating the name and address of your usual dealer.

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WE ARE SECOND TO NONE.

If you want a job well done, and cheaply, try us. We build to order only Portable Bungalows, Brooders, Incubators, Pig and Poultry Houses, and all Appliances for the Poultry Farmer, including Hoppers, Troughs, Egg Boxes, Fittings and Felts. Also Gates and Fencing Erected.

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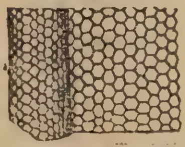

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(WHITE LEGHORN)

THE LARGEST ONE BREED FARM ON EARTH
OR AS FAR AS WE KNOW ANYWHERE ELSE

ARE YOU PREPARING FOR COMING 1926 SEASON?

WE are PREPARED to meet all DEMANDS. Our VAST Plant with its SUPERB Breeders is already in PRIME condition to SUPPLY HATCHING EGGS, or D.O.C., at short notice. We have now in STOCK quantities of our famous "IN LOCO PARENTIS" Brooder Plant, which has proved its worth for the past two seasons (Single or Multiple Outfit).

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6-in. Planed and Rebated Weatherboards	17/6
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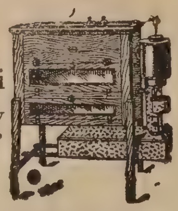

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HATCHING EGGS
From Selected Flocks,
8/6 doz., 60/- per 100.

3 MONTHS OLD PULLETS.
BOOKING NOW.
10/6 each.

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We can now offer an excellent lot of individually bred birds from our Gold and Silver Medal strains of White Wyandottes and White Leghorns.

Prices from **15/-** to **50/-** each.
1925 Pullets from **12/6** ,,
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(Guaranteed large egg.)

This Year's Winners at the Lancashire International, of the Light Breed Section (Single Bird), score value 266.

All stock sent on approval. Hatching eggs are now being booked for next season.

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LATEST REPORT:—
1st, Harper-Adams' Present Test.
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LANCS. U.P.S. LAYING TEST.
1st Prize, SILVER CHALLENGE CUP, Sec. 10, Black Leghorns.
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2nd Prize, £10, over 94 pens, all breeds (Small Breeders).
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Three Month Old Pullets, 7s. 6d. each. (Reduction for Quantities). Satisfaction Guaranteed.

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UTILITY
WHITE WYANDOTTES

1923-24 Laying Test Successes:

EAST ANGLIAN	Silver Medal
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Cockerels from £1 1 0.
Pullets, 16/-.

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WHITE LEGHORNS.
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From Prize-winning Utility Strains.

All are guaranteed; well grown; sound and healthy.

Hatched February and March.

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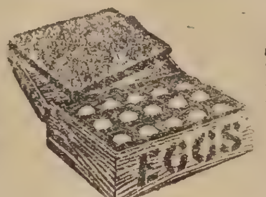

These boxes are made of wood, and are far superior to any other make of their kind. They have been officially passed by all Railway Companies for conveyance of eggs at the Companies' risk.

Used by many larger Breeders who are highly satisfied with them.

EGG BOXES from 54s. per gross.
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White Leghorns from Test Pen winning four Certificates, mated to cockerel by Test Winners of First and Gold Medal. Black Leghorns, Parents from noted Test Winners, headed by cockerels whose sisters were well up in National Test finished this year, 1925. Price One Guinea Each above pens, also others cheaper. Apply—George Price, New Queniborough, Syston, near Leicester.

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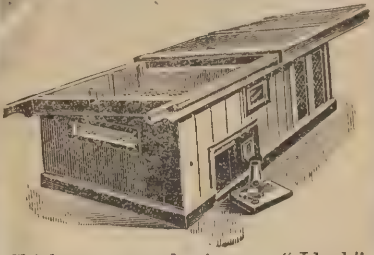

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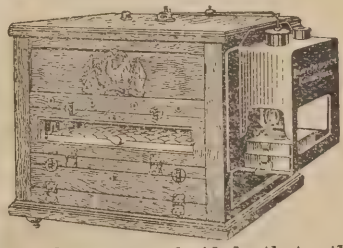
The "STANDARD" Incubator

WORKS WITH HOT WATER,

Which is universally acknowledged to be the best system for a steady reliable temperature.



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PRICES:

60 Egg Capacity	£7 10 0
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WHITE LEGHORNS.
Sitting and Stock Birds in Season.

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GRANULATED MOSS LITTER

For Poultry Houses.
1 2-Bushel Sack, containing about 28lb., 3/-; 2, 5/9; 3, 6/-; 5, 13/-; 2 cwt. Bales, canvas covered, 10/6.
All Carriage Paid. Cash with Order
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Barnevelders (BARONESS DE BRIENEN STRAIN).

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Grand Colour and Type. LARGE EGGS. Winner of the S.P.B.A. Laying Test. Certificates (Harper-Adams and National Tests Silver Cups, Medals, and many prizes gained. Also Pedigree LIGHT SUSSEX and WHITE LEGHORN INDIVIDUALLY HATCHED COCKERELS EGGS BOOKED NOW. **Write for Catalogue. Inspection Invite**

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EGGS FOR HATCHING AT LOW PRICES.

	14 Eggs. Not Replaced.	50 Eggs.	100 Eggs.
Light Sussex	6/6	22/6	45/-
White Wyandottes			
Rhode Island Reds (s.c.)			

85 per cent. Fertile Guaranteed.

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Every Stock Bird and Egg sent out is personally recommended. Send for Free Catalogue.

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WRITE NOW. A few really Good Cocks and Cockerels to spare.

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WHITE WYANDOTTES ONLY.

Pedigree Utility Stock Cockerels.

S.c. R.I. REDS and W. WYANDOTTES.
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These birds are all sound and healthy, well-grown, and typical of their breed. They have been reared on free range, under ideal conditions. These birds have been severely culled, and only the best retained. Only dams with winter records of 40 and over are retained for cockerel breeding. I guarantee entire satisfaction. All Stock is sent carriage paid, and on seven days' approval. NOW BOOKING ORDERS FOR EGGS FOR HATCHING AND CHICKS

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WHITE WYANDOTTES. WHITE LEGHORNS.

Regd. Pens 2 GNS.	*Pens No. 1* $1\frac{1}{2}$ GNS.	*Pens No. 2* 25/-

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The whole of the valuable stock which has made this Farm so famous has been retained, and the breeding will be continued on the same lines, with the usual strict selection as formerly.

White Leghorns. White Wyandottes.

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Trap-nested all the year.

Bred entirely from TESTED PARENTS.

1925 LIST OF COCKERELS FROM INDIVIDUALLY RECORDED HENS, ALSO LIST OF SITTINGS AND CHICKS FOR 1926 ON APPLICATION.

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ARMITAGE'S

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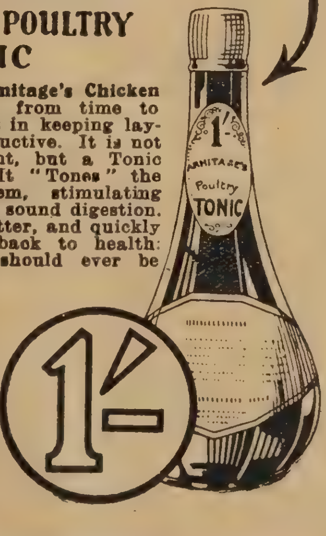

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Breeding Stock,

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COCKERELS Range-reared youngsters for Present or Future Delivery, 12½% off Autumn Prices for October Delivery.

A few Tested Males with full Pedigree.

RECORDED HENS Some good birds with totals from 170 to 250 1st grade eggs, Tested for Hatchability.

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PURE WHITE FISH MEAL

IS UNSURPASSED FOR UNIFORMITY OF QUALITY AND PURITY.

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Bred from five generations of Harper-Adams' and National Gold Medal Winners.

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Special Quality.
16s. 6d. per cwt.
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(44 per cent. Alb.,
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OWN SPECIAL MEAT MEAL.

47.05 per cent. Alb., 17 per cent. Oil, 26.85 per cent. Phos. of Lime.
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37.75 per cent. Alb., 9.78 per cent. Oil, 37.06 per cent. Phos. of Lime.
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Thoroughly sterilised, and free from injurious chemicals; contains about equal proportions meat and bone.

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LAYING MEAL

(Newman's Formula).
13/- Per Cwt., F.O.R.
STONE and NEWPORT, (SALOP)
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SPECIALITY.
RHODE ISLAND REDS.

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A few mis-marked Pullets and Ducks, Cheap, for Sale.

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TRAP-NEST RECORD CARDS,
giving records of 21 fowls on each side.
1/3 dozen, 6/6 per 100, 250 for 14/6.
Also stocked for 50 fowls on each side,
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Also Trap-Nest Books, Hatching Records., Pedigree Books, Poultry A/c Books, &c. Specimen Rulings Free.
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PROMPT DELIVERY. ALL SIZES.

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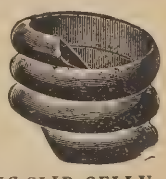

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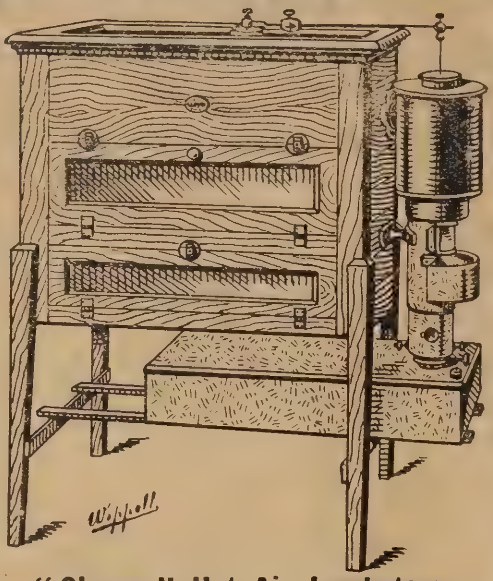

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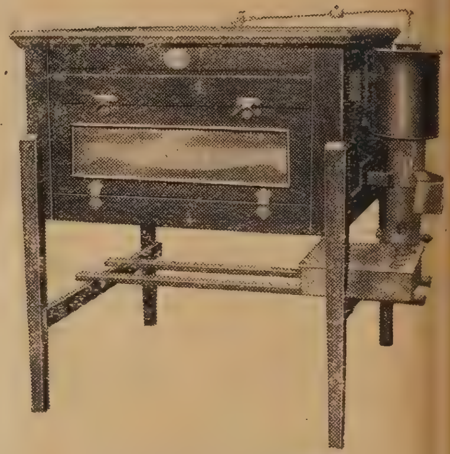

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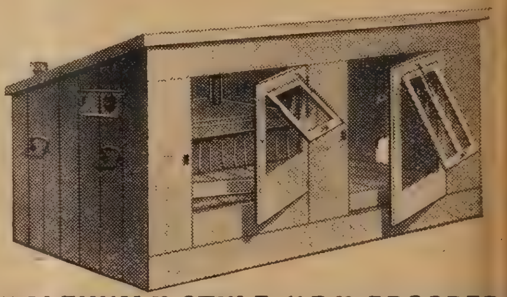

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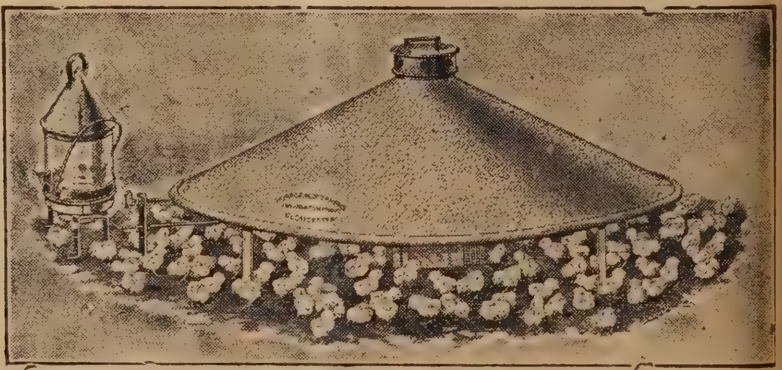

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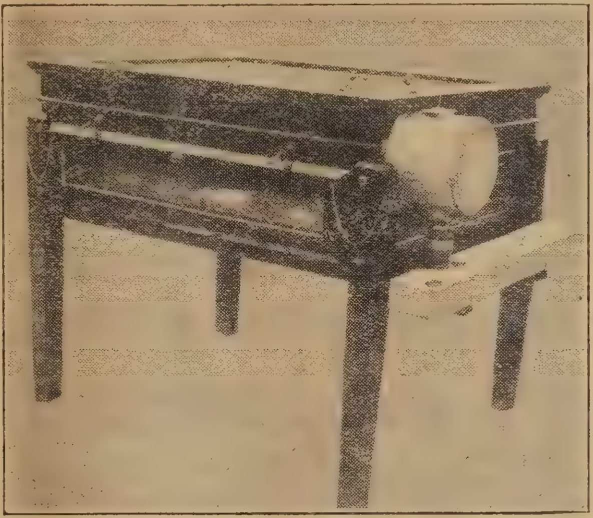

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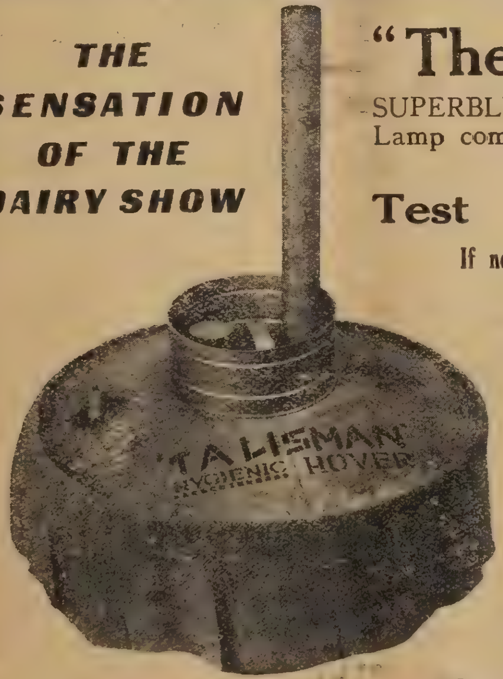

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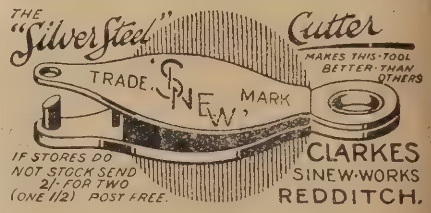

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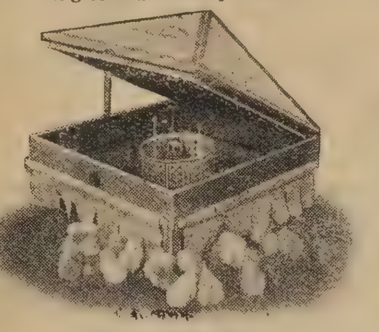

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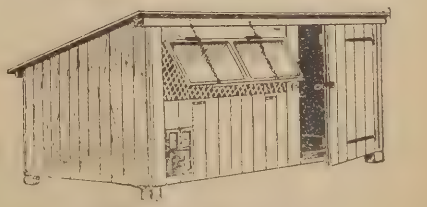

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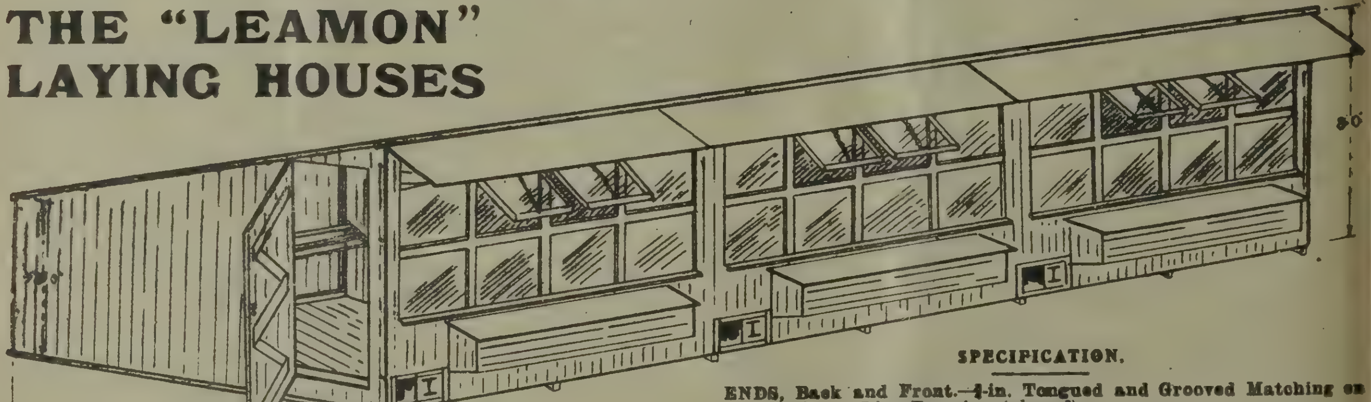

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Printed for the Proprietors by the City and South London Printing and Publishing Co., Ltd. (T.U.), 94, Farncombe Street, S.E.
Edited by Mr. Tom Newman and published by the Scientific Poultry Breeders' Association, Budgwick.

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